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develop
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"Whatever happens now, Infinity Ward as it was, is dead."
David Braben, p14

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Tim Schafer: ready for Brighton
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Survey says: student skills crisis

Train2Game research shows the next generation of industry entrants lack relevent training, as Skillset opens census

by Stuart Richardson

Research performed by open learning provider Train2Game in association with *Develop* has highlighted a lack of relevant skills among recruits to the game development industry.

The survey aimed to examine the game development industry's attitudes towards education and recruitment. Its findings suggested that over half of industry respondents perceive a considerable gap in skills existing within their areas of business – with over 80 per cent citing a lack of experience among prospective employees as the main barrier to their recruitment.

Elsewhere the survey's findings suggested that: 68.4 per cent of industry respondents hired a maximum of just two entry level staff per year, with 56.4 per cent offering work experience or internships to students.

Attention to detail, creativity and team playing were named as the most valuable skills people look for in entry level staff. 55.8 per cent of respondents agreed strongly that developers need to be more involved in ensuring students have relevant industry skills.

52.5 per cent of those surveyed stated that entry level staff could expect to progress to a more senior position within 18 months of starting at a company.

Fair starting salaries for different entry level positions in the industry were quoted by the highest percentage of respondents as around £16,001 to £19,000 for designers, £18,001 to £20,000 for programmers and £19,001 to £22,000 for animators

They may be smiling now, but the future may not be everything these graduates are expecting

> ***"Companies involved in development clearly need a steady flow of new recruits to ensure they can keep up."***
>
> Tony Bickley, Train2Game

"Companies involved in an industry as dynamic and fast-moving as game development clearly need a steady flow of talented new recruits to ensure they can keep up with the competition," Train2Game course director Tony Bickley of DR Studios said.

"The results of our survey highlight the need for aspiring game developers to demonstrate a good level of knowledge and expertise in their chosen field, in order to help fill the perceived skills gap and really make an impression on potential employers."
www.train2game.com

Skillset launches creative industry census

Skillset wants to put together the most comprehensive profile of working life in the UK's creative media industries – and the education authority needs your help to do it.

The 2010 Creative Media Workforce and Employer Surveys – launched last month – will help Skillset compile the profile and assess how the UK industry is faring in the current global economic climate.

Contributors will be asked about their skills needs, experience of training and recruitment, future plans and working patterns. Findings will be used to inform Skillset's ongoing efforts to help the creative media industries remain as important tomorrow as they are today.

The results of the survey will be published exclusively by *Develop* at the end of the year.

Skillset will use the survey to pinpoint future training support, issues affecting the sector and spot trends that could lead to skills shortages or over-supply.

To take part, visit www.skillset.org/playyourpart. If you would prefer to be contacted by phone, email research@skillset.org.

Editorial

A night to remember

THE HUGELY varied list of finalists vying for the 21 Develop Awards up for grabs in 2010 is a testament to the game development field's increasing sophistication, expansion and innovation.

I feel like I say that every year, as we are always striving to keep the Develop Industry Excellence Awards both relevant and focused on genuine excellence. But it really is true: while these two pages are about our awards, our awards are about games development and its many strengths.

The *Develop* team went through hours of deliberation and reasoning to produce the final list you see to the right. The fact that games developers in Europe continue to impress and astound with gaming experiences that entertain the masses year on year made it quite the challenge. Compressing a longlist of 160 companies down to the shortlist was not easy.

There are four new awards in the Develop line-up this year – Best New Download IP, Micro Studio, Audio Outsourcer and Visual Outsourcer – that are emblematic of the ways we have seen the biggest changes. On the one hand, more and more tiny teams are disrupting the status quo. On the other big budget games continue to expand and call on specialist third parties to succeed.

And don't just take the Develop Awards' word for it – in this issue you can see the industry basically change before your eyes. Our indie roundtable proves that the bedroom coder is alive and kicking (p.24); the increasing sophistication of middleware has come to support any business interested in games, not just those with big wallets (p.38); and our Game Changers list shows that both giants and minnows (some of which, incidentally, are Develop Award nominees) are shaping the business.

80 companies. 14 countries. 21 awards. 24 different games. 13 original properties. Whichever way you look at it, the 2010 Develop Awards recognise the huge variety of talent in the games industry.

Congratulations and good luck to those who are nominated. See you on the night.

Michael French
michael.french@intentmedia.co.uk

Develop Awards:

Over 80 companies from across Europe competing for key prizes at

Over 500 games industry execs are expected to attend July's event, hosted by the excellent Rufus Hound (below left). Media Molecule (below) were the big winners last year

TINY TEAMS and giant 200-strong studios will battle it out for 21 accolades at next month's Develop Industry Excellence Awards.

The finalists for the popular summer awards show for European games developers are now unveiled (*see full list, right*), and over 80 companies from across Europe are competing.

Indie developers, outsourcers, in-house teams and technology firms will vie for awards like Best New IP, Technical Achievements and Visual Arts at the event which takes place at the Hilton Metropole Hotel in Brighton.

Sony leads the charge with nine nominations for its various teams in Europe, from R&D Research to its XDev publishing support team in Liverpool.

Elsewhere there are five nominations for *Split/Second* and its developer Black Rock, plus four apiece for *Heavy Rain*/Quantic Dream, *Batman: Arkham Asylum*/Rocksteady.

Top comic Rufus Hound will host this year's event, and Autodesk has already signed up as Exclusive Drinks Sponsor.

With four new awards added in 2010, the Develop Awards seek to recognise developers of all shapes and sizes from tiny teams you may not have heard of yet, such as Hello Games and Distractionware (nominated for Best New Download IP and Micro Studio) and industry giants like Sega or Microsoft (Publishing Hero).

Now the finalists are named, an expert panel of 100 games development execs will vote on who they think should win.

Develop will also name the winners of the Development Legend and Grand Prix awards on the night of July 14th. Recipients of these special prizes are chosen by the *Develop* team after soundings from the industry.

To book your place at the event contact Kathryn.Humphrey@intentmedia.co.uk, or call 01992 535 646.

Until June 7th there are discounts as big as £500 on tables and 25 per cent on seats. After then the prices change to: Gold Table of 10 – £2475 + VAT; Standard Table of 10 – £2290 + VAT; and Single Seats are £235 + VAT.

There are also a number of promotional possibilities at the event that include category, award and party sponsorship. Contact Katie.Rawlings@intentmedia.co.uk for more information on how you can get involved. **www.developawards.com**

the finalists are revealed

July 14th event ● New prizes for outsourcers join updated Download and Micro Studio awards

THE FINALISTS

CREATIVITY

Best New IP
Blur (Bizarre Creations)
Heavy Rain (Quantic Dream)
Alan Wake (Remedy Entertainment)
EyePet (SCE London Studio)
Backbreaker (NaturalMotion)
APB (Realtime Worlds)
Split/Second (Black Rock Studio)

Best New Download IP
Angry Birds (Rovio)
VVVVVV (Distractionware)
Chime (Zoe Mode)
Machinariam (Amanita Design)
Orbital (BitForge)
Blue Toad Murder Files (Relentless Software)
Joe Danger (Hello Games)

Best Use of a Licence or IP
Batman: Arkham Asylum (Rocksteady Games)
Metro 2033 (4A Games)
Silent Hill: Shattered Memories (Climax Games)
Doctor Who: The Adventure Games (Sumo Digital / Revolution Software)
LittleBigPlanet PSP (SCE Cambridge)
Aliens vs Predator (Rebellion)

Visual Arts
Machinarium (Amanita Design)
Batman: Arkham Asylum (Rocksteady Games)
Alan Wake (Remedy Entertainment)
Heavy Rain (Quantic Dream)
EyePet (SCE London Studio)
Split/Second (Black Rock Studio)

Audio Accomplishment
Battlefield: Bad Company 2 (EA DICE)
Blur (Bizarre Creations)
DJ Hero (FreeStyleGames)
Operation Flashpoint 2: Dragon Rising (Codemasters)
Split/Second (Black Rock Studio)
Silent Hill: Shattered Memories (Climax)
Batman: Arkham Asylum (Rocksteady Games)

Publishing Hero
Sega
Sony XDev
Bigpoint
Microsoft
Channel 4
BBC

TECHNOLOGY & SERVICES

Technical Innovation
Heavy Rain (Quantic Dream)
Sony Augmented Reality (*EyePet/Invizimals*)
Unity
Bigpoint
Split/Second (Black Rock Studio)
Hustle Kings (VooFoo Studios)

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Hansoft
SCEE (R&D/SN Systems/PlayStation Home)
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Unreal Engine 3
Gamebryo Lightspeed
CryEngine
Trinity Vision

Services
Babel
Audiomotion
Catalyst
Testology
Universally Speaking
Testronic Labs

Audio Outsourcer
Outsource Media UK
SIDE
Richard Jacques Studios
Nimrod
Media Mill
Audio Guys
High Score Productions

Visual Outsourcer
SPOV TV
Axis Animation
Image Metrics
Realtime UK
Imagination Studios

Recruitment Company
Natural Selection
Amiqus
OPM
Aardvark
Handle
SpecialMove

STUDIOS

Best New Studio
Lightning Fish
VooFoo
Hello Games
Six to Start
Wonderland
4A Games
NaturalMotion

Micro Studio
Startfruit
Mobigame
Amanita Design
Binary Tweed
Hello Games
Tag Games
Distractionware

Handheld Studio
Rovio
Rockstar Leeds
Novaroma
SCE Cambridge
Ideaworks Game Studios
Digital Goldfish

Business Development
Avalanche
Sony XDev
Eutechnyx
Blitz 1UP
X2 Games – Exient
NDreams

In-House Studio
Rocksteady Games
Bizarre Creations
Black Rock Studio
SCE London Studio
Sports Interactive
Creative Assembly
Codemasters

Independent Studio
Quantic Dream
Sumo Digital
Remedy Entertainment
Jagex
Red Lynx
Realtime Worlds

SPECIAL RECOGNITION
Development Legend
Grand Prix

develop
INDUSTRY EXCELLENCE AWARDS

DEVELOP DIARY

YOUR COMPLETE GAMES DEVELOPMENT EVENT CALENDAR FOR THE MONTHS AHEAD...

13-15 JULY 2010 develop in brighton

THE DEVELOP CONFERENCE
July 13th to 15th
Brighton, UK
www.develop-conference.com

The Develop Conference is where the European dev community comes together to learn from each other and share experiences, be inspired by world renowned experts, get up-to-date with the latest tools and techniques, make new contacts and catch-up with old ones.

The conference will open on July 13 with the Develop Evolve track – revealing the latest emerging game markets, from mobile to social, digital to casual games.

Following this, the event adopts a traditional approach, covering some of the issues facing the industry today and some of the most promising titles on the radar.

Over the last four years the Develop Conference & Expo has rapidly established itself as the leading event for games design and development professionals across Europe.

JUNE 2010

FESTIVAL OF GAMES
June 4th to 5th
Utrecht, The Netherlands
www.festivalofgames.nl/site

APPLE WORLDWIDE DEVELOPERS CONFERENCE
June 7th to 11th
Moscone West, San Francisco
http://developer.apple.com/wwdc/

E3 2010
June 15th to 17th
Los Angeles, US
www.e3expo.com

WORLD OF LOVE
June 25th
London, UK
www.worldoflove.eventbrite.com

GAME HORIZON 2010
June 29th to 30th
Newcastle, UK
www.gamehorizon.net

JULY 2010

ANIMATION 10 - AWARDS NIGHT
July 9th
Manchester, UK
www.cs.manchester.ac.uk

GAME HERO 2010
July 10th
Gateshead, UK
www.gatesheaddigitalsummer.com

DEVELOP IN BRIGHTON
July 13th to 15th
Brighton, UK
www.develop-conference.com

DEVELOP AWARDS
July 14th
Brighton, UK
www.develop-online.net

CASUAL CONNECT SEATTLE
July 20th to 22nd
Seattle, US
seattle.casualconnect.org

SIGGRAPH 2010
July 25th to 29th
Los Angeles, US
www.siggraph.org/

AUGUST 2010

DARE PROTOPLAY
August 13th to 15th
Edinburgh, Scotland
www.daretobedigital.com

GAMESCOM 2010
August 18th to 22nd
Cologne, Germany
www.gamescom-cologne.com

EDINBURGH INTERACTIVE 10
August 25th to 26th
Edinburgh, Scotland
www.edinburghinteractivefestival.com

CEDEC 2010
August 31st to September 2nd
Yokohama, Japan
http://cedec.cesa.or.jp/2010/en/

SEPTEMBER 2010

TOKYO GAME SHOW
September 16th to 19th
Tokyo, Japan
http://tgs.cesa.or.jp/english/

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Jón Hördal Jónasson
Chief Operating Officer, CCP Games

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GAMES
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What is reality?
0 - 1
30
Kochavi
11
08

WorldView

Our monthly digest of the past month's global games news…

DEALS

Indian studio **Swadesh Animation** has licensed four **Xaitment** AI game tools for use in upcoming MMORPG *Online Tales*.

Facebook and **Zynga** have entered into a "five-year strategic relationship" that will see an expanded use of Facebook Credits in Zynga games.

Korean studio **Anipark** has licensed **Epic Games'** Unreal Engine 3 for two separate projects, a baseball title and a MMORPG.

Online publisher **Funcom** has signed an agreement with Sweedish start-up **Stunlock Studio** to publish upcoming title *Bloodline Champions*.

Korean studio **Gorilla Banana Entertainment** has licensed **Emergent's** Gamebryo platform for in-development MMORPG *Red Blood*.

Activision has announced a deal with translation firm **XLOC** to allow for European localisation of racing title *Blur*.

Social gaming giant **Playfish** has signed a deal with **EA** to develop a **Facebook** game based on popular franchise *FIFA*.

EUTECHNYX SECURES £6M INVESTMENT

Eutechnyx has secured a £6m ($9.25) investment from Amsterdam-based veture capital firm Prime Technology Ventures.

Eutechnyx has said that the investment will help to finalise the development of upcoming racing title *Auto Club Revolution*.

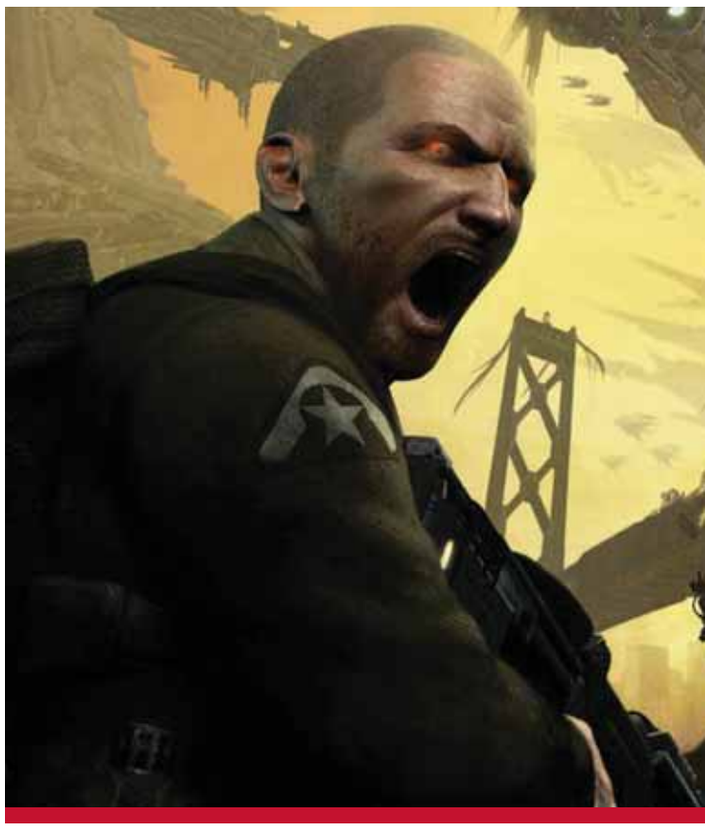
The firm also aim to use the money to develop their free-to-play infrastructure before a larger move into casual online games.

"When we saw what Eutechnyx was working on, we knew we had to be involved, particularly given Eutechnyx's track record, design heritage and jaw-dropping technology," said Prime Technology Venture's general partner Monish Suri.

Eutechnyx CEO Brian Jobling said that he was thrilled to have secured the investment.

"As an independent developer, this infusion will help us to continue to forge our own destiny within a rapidly changing games industry."

www.eutechnyx.com



USA

EMERGENT DEAL FOR LEGO UNIVERSE

Emergent has revealed a licensing deal with the studio building the upcoming online game *LEGO Universe*.

The Gamebryo engine vendor signed an agreement with Colorado-based studio NetDevil, allowing the studio to use Emergent's LightSpped engine to build the *LEGO* MMO.

"The best part about Emergent's tech was that we were able to get the artists producing actual content within the first month of the the beggining of the project," said NetDevil technical director Erik Urdang.

He added: "We evaluated other engines and chose Gamebryo for its render pipe and memory management features, in addition to the significant engineering support which allowed us to optimize the technology."

www.emergent.net

UK/INDIA

LIGHTNING FISH TO OPEN STUDIO IN INDIA

Banbury based Lightning Fish will be opening a development studio in Pune, India.

The new studio will open with five senior managers: the studio head and the department leads. Lightning Fish has said it hopes to have twenty staff in Pune by the of the year. The studio will employ environment and UI artists, tools and Actionscript programmers, motion editors and QA staff.

The new studio will support the firm's UK development teams as Lightning Fish seeks to build on the expansion.

Simon Prytherch, CEO of Lightning Fish commented: "When we started Lightning Fish we planned to be a dominant force in the development of motion tracking games. We also wanted to build the capability to develop three titles simultaneously. 2010 is the year that we achieve both these goals".

www.lightningfishgames.com

USA

THQ UNVEILS PARTNERS DIVISION

THQ has unveiled a brand new division called THQ Partners.

Like EA Partners, THQ Partners offers developers "access to THQ's global retail and online publishing network".

The division will be led by VP Tim Walsh, who joins THQ from in-game ad firm IGA.

"I'm extremely pleased to join THQ and launch THQ Partners," said Walsh.

"I'm looking forward to working with a select number of world-class developers and publishers to distribute their great games through our global network."

www.thq.com

NETHERLANDS

KILLZONE 2 WINS IVOR NOVELLO AWARD

Killzone 2 has been award the Ivor Novello Award for best original video game score.

The soundtrack to the Guerilla Games title, composed by Joris de Man, won the inaugural games-facing award at the event which rewards song writers and composers for their work in various fields.

It was lobbying from famed games composer Richard Jacques that saw Ivor Novello add a games award this year.

Killzone's award was handed out at an event in London that also featured stars like Lily Allen and Paolo Nutini.

www.guerilla-games.com

USA

GAIKAI SCORES SECOND FUNDING ROUND

A group of venture capitalists have pumped over $10 million in the upcoming cloud gaming technology service Gaikai.

The service will allow gamers to play a diverse range of videogames through numerous devices and platforms via its online streaming.

Gaikai also offers online and remote access to games installed on Gaikai's farms of powerful computers and servers, which are now being set up across the globe.

The likes of Rustic Canyon Partners, Benchmark Capital and Triplepoint Capital have participated in the investment round – now Gaikai's second phase of private funding. An anonymous investor has also fronted cash.

"Gaikai offers video game publishers and retailers an innovative cloud-computing solution that enables the acquisition of new

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INSOMNIAC SIGNS WITH EA PARTNERS

Insomniac Games - the PlayStation studio responsible for key Sony franchises Ratchet & Clank and Resistance - is to embark on its first multiplatform project thanks to a deal with EA Partners

The firm is working on a new 360/PS3 title while also continuing its work with Sony.

Insomniac will get to retain ownership of the game IP, while EAP will handle sales and distribution.

The deal with EA represents a change in development direction for Insomniac. The 200-strong studio is known for its slate of PlayStation-only games – and amongst other developers for its database of PS3 technical documentation.

Speaking to *Develop* before the deal was unveiled, Insomniac CEO Ted Price said:

"Our relation ship with Sony remains strong.

"However we looked around and talked with many partners who have global publishing power and expertise across multiple platforms – but EA is clearly very strong globally and, more importantly, EA Partners works with independent developers who own their properties.

Price added that the game itself will be unveiled "when we're ready".

www.insomnicgames.com

video game players at a dramatically reduced overall cost," said Nate Redmond of Rustic Canyon Partners.

www.gaikai.com

SWEDEN

RIOT GAMES OPTS FOR HANSOFT

Sweden-based management tools vendor Hansoft has revealed a licensing agreement with *League of Legends* studio Riot Games.

The LA-based Riot says it decided to use Hansoft's project management tools after looking for a pipeline solution that was both "flexible enough to handle agile development", and able to offer "the depth of reporting we need at Riot Games".

Mark Franz, director of development at Riot Games, said Hansoft has "dramatically reduced" the studio's planning overhead.

He adds: "It has given us much greater clarity around how quickly we're progressing towards our goals, as well as the flexibility we need to support the fast paced development at Riot Games".

www.riotgames.com

CHINA

ZYNGA ACQUIRES CHINA-BASED XPD MEDIA

Facebook gaming giant and Farmville developer Zynga has acquired Chinese social gaming company XPD Media, paving the way for the former to establish a presence in the lucrative Asian market.

"As the largest Internet market in the world, China is at the vanguard for virtual goods based gaming innovation," stated Zynga's Robert Goldberg, VP of corporate development for the firm.

"We expect our new office in Beijing and the incredible talent in the local market to play a strategic role in our mission to create the best social gaming experiences available anywhere in the world."

www.xpdmedia.com

USA/UK

4MM GAMES IN BID TO OPEN UK STUDIO

New York-based 4mm has outlined plans to open a UK studio.

Early in May the firm expanded its business to Europe by launching a sales and marketing office in London under the leadership of advisory board member Geoff Heath.

"Opening a UK studio is absolutely something we're looking at," said Heath.

4mm believes that a British dev base will be the final piece in the puzzle to becoming a 'global digital publisher.'

"The UK has a tremendous talent pool and history in games," said Heath.

"We will be watching closely to see if the new Government follows through on its pre-election proposals."

4mm is currently preparing to release new social game franchise *Def Jam Rapstar* later on in the year.

www.4mmgames.com

SAY WHAT?!

"With iPods, iPads, Xbox and Playstation - none of which I know how to work - information becomes a distracation."

*Not so much 'Yes We Can' as 'No You Shouldn't', **Barack Obama**. Man, you used to be cool.*

"For the last few years it's all been about graphics performance. We are entering a period where that is a solved problem."

*Really, **Gabe Newell**? No more improvements at all? I mean, stuff looks good right now, but... you know...*

"It's not based on anything we have heard about."

*The **Daily Mail** explains the complex method used to work out the $100m budget it cited for Red Dead Redemption.*

"I think we can name a company that is a fruit that is in the news a lot about their arrogance."

*Whoever could you be reffering to, SCE Austrailia's **Michael Ephraim**? Orange? Blackberry? Apple? Apricot?*

INDUSTRY ANALYSIS SPONSORED BY Bethesda SOFTWORKS

COMMENT: BUSINESS

Freeing the iPhone

by Rick Gibson, Games Investor Consulting

There's no question that the iPhone has had a huge positive impact on mobile gaming since launch in 2007. The iPhone gaming market is growing healthily and has attracted crowds of independents looking to go 'direct' (through Apple). But as this market has matured, major potholes have killed many plucky start-ups. This potted history will evaluate whether the pitfalls outweigh the benefits.

JAVA CRISIS

Few games markets are more broken than Java mobile gaming. Most indie developers work for hire with no royalty, keeping them small and cash-strapped. Poor audience profiling means developers have little idea who they are developing for, resulting in copious games for boys when the average Java gamer is a woman in her mid-twenties. The cost of porting to thousands of handsets outweighs initial development costs for publishers, driving down quality. Hundreds of competitors on operator decks drove decreasing numbers of viable large publishers to pay 'marketing fees' for placement. Where Japanese operators triggered massive innovation by taking 30 per cent of a transaction, Western operators take 40 to 50 per cent, constricting the market. Consumers are overcharged for downloads, and buy Java games in brief spurts, shortening most games' viable shelf lives. Below five per cent of Western mobile subscribers actually buy games, a figure gradually falling.

Enter iPhone. Apple solved many of these problems by creating a desirable device with a great UI and a smooth buying experience. Low handset variation has largely extinguished porting. Development is easier and faster. The App Store made games more prominent, and Apple sensibly shares 70 per cent with developers. They take no payments from publishers for placement, so the chart's higher reaches feature many more original independent IPs. Most significantly, Apple entirely bypasses operators and ensures internet is bundled for free. iPhone's predominantly male users love buying premium games apps made by boys for boys, and well over three times as many buy iPhone games versus Java.

The contrast between these two is stark. While Java declines, iPhone has reinvigorated a market that had got stuck at around $1bn in the West, and will take the lion's share in future, despite having a relatively tiny installed base (only 5m in the UK). With so many old handsets still in use, Java gaming will linger on for several years but it won't be pretty.

iPhone had a bright childhood, abounding with breathless reports of bedroom programmers making millions. In its first year, a number of early movers made substantial revenues from quick little games. By mid-2009, the App Store passed 10,000 games and Apple's tiny editorial and approval teams creaked under piles of new applications. Average unit sales, prices and returns for new IP were falling fast. Despite experienced work-for-hire studios like Distinctive reporting that any iPhone game costing over $40,000 would not break even, an arms race has been fought by studios raising production values over $1m to counter rising competition. Little studios reliant on premium app sales started to go out of business, while bigger studios started

> ***"The contrast between Java and iPhone is stark. While Java declines, iPhone has reinvigorated a market that stuck at around $1bn in the West."***

marketing heavily to keep their branded apps in the charts. The market now consists of a thin layer of big publishers and top-tier iPhone studios but few studios at scale below them. Older studios could port existing games to iPhone for low cost and still do well, but original IP struggles to be shine in a market with over 35,000 games.

Early mover Ngmoco watched this change in the market with concern. Lots of low quality games at low prices felt like Java all over again. To make a business at the scale demanded by investors, it calculated they needed a game in the top five all year round. The premium app market looked unsustainable before Apple's U-turn to enable freemium, in-app purchasing. Ngmoco went free in July 2009, acquiring several freemium studios and making its premium games free. These are monetised by selling virtual goods, advertising and offers, optimised by data mining. It radically changed production methodology to build only the minimum required to live-test player retention levels and refine their game designs. Ngmoco has even found way around Apple's ban on third party premium currencies by selling services and not items. Ngmoco estimates it makes four times more money from freemium than premium, and is thought to be grossing well over a million dollars each month.

Ngmoco's We Rule is just one of its freemium games that has upended expectations of how iPhone games make money

While iPad steals media attention, Apple and Facebook have signalled mobile gaming's future through recent announcements. Apple's forthcoming Game Center is a social network platform that provides a viral marketing channel for studios to exploit players' social ties. In parallel, Facebook has sneaked in reference to location-based services in its latest API, which means that mobile app developers, like Foursquare, may be able to map a Facebook Friend list to its mobile players' locations.

Anyone who has read our previous columns will not be surprised to hear us saying that free or social network gaming are exciting opportunities, but iPhone's transition to these more sustainable, higher value commercial models could trigger huge innovation. Social gaming on iPhone will be held back until either the ban on third party premium currencies is fully reversed, or Apple introduces its own currency, much like Facebook's controversial Credits. Whatever happens, iPhone gaming has discovered a new kind of highly lucrative and socially relevant mobile game.

Rick Gibson is a director at Games Investor Consulting, providing research, strategy consulting and corporate finance services to the games, media and finance industries.
www.gamesinvestor.com

COMMENT: DESIGN

Steps to a Top 10 Game

by Billy Thomson, Ruffian Games

I've been looking into the key areas that I believe a top quality game needs to deliver to all but guarantee commercial and critical success.

Looking at the games that have dominated the top ten over the past few years you'll find that the majority of them – with the exception of Wii games – will do a good job of about three-quarters of the top ten list I have created below.

01 The USP
This is generally the first thing that a publisher is looking for before they sign a game. Every game needs a hook, the better the hook the easier it will be for the publisher's marketing team to really get behind your game and sell it to the gaming public – more on this later.

02 Striking visuals
At the moment it seems that if your game doesn't look as good as *Gears*, *Assassin's Creed* or *Uncharted* it'll get slated as 'looking like ass'. It doesn't matter how much is actually going on in the scene, the average gamer simply doesn't care how difficult it is to render thousands of buildings, characters and vehicles and keep the quality of visuals high. They just want their games to look 'awesome' rather than 'ass'.

03 Story
One of the best ways to pull a player through a game is to give them an engaging story that unfolds as they play. The best ones actually allow the player to alter the course of the story depending on their actions in game. It's a really difficult art to get right, but if you do the player is far more likely to play to the end and be left with a real sense of closure and accomplishment. If it's a franchise, you're building a lot of players far more likely to buy the sequel if they actually finished the first game, too.

04 Tight, intuitive controls
The most important of the ten for me, if the game doesn't play well then nailing all other nine would still only serve to make the game the shiniest, most polished of turds. The player's direct connection with the game will always be paramount for me, if you get this right players will keep coming back again and again to have fun playing the game.

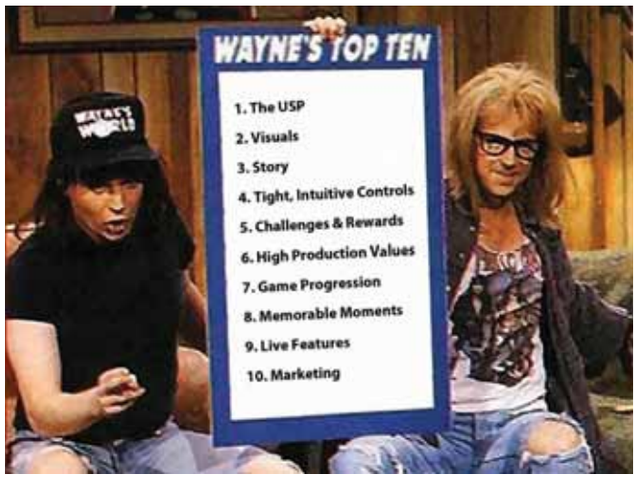
05 Challenges and rewards
People love to be challenged and even more so they expect to be rewarded for their efforts. If you can supply varied challenges that provide new rewards on completion then use those rewards to set new more testing challenges which unlock yet new rewards you have the perfect system.

06 High production values
Ten years ago only a handful of developers consistently delivered the highest production values. These days more and more games have extremely high quality production which has set an equally high level of expectation from the gaming public. We all love our games to look and sound amazing, but the financial costs are frightening. It's a vicious circle.

> ***"The average gamer simply doesn't care how difficult it is to render thousands of buildings, characters and vehicles and keep the quality of visuals high."***

07 Game progression
Whether it's upgrading a player ability or item of equipment, getting to the next cut scene, unlocking the next level – whatever it may be – progression is one of the biggest reasons that players continue to play any game. The more ways your game teases the player to play a little longer to get that next item the longer they'll keep playing.

08 Memorable moments
Most games have moments that you can't wait to talk to your mates about, whether that's a scripted set piece, a storyline twist, a new ability or an item of equipment. Good games tend to have a couple of them, the great games manage to constantly deliver them again and again throughout the course of the game.



09 Live features
Generally this will manifest in one of two ways, an online multiplayer game mode or a DLC pack. One of the best ways to keep people playing your game is to keep adding new content and new experiences to support the game after release.

10 Marketing
Unfortunately, without good marketing even the very best game can be overlooked by the gaming public. This means we have to spend millions on making sure the gaming public know everything we want them to about the game. This is money we'd all prefer to spend on development, but needs must and all that.

So that's my recipe for guaranteed gaming success sorted out, all we need to do now is make a game that delivers all ten. In theory if we can manage that the review scores will follow suit. If they don't I'll be doing a door-to-door 'Jay and Silent Bob job' on the reviewers.

Billy Thomson is the creative director of developer Ruffian Games. Billy has over 14 years experience of designing video games, including design roles on *Grand Theft Auto* and *GTA2*, before working as lead designer on Realtime Worlds' celebrated *Crackdown*.
www.ruffiangames.com

INDUSTRY ANALYSIS SPONSORED BY Bethesda SOFTWORKS

COMMENT: INDUSTRY

Activision vs. Infinity Ward

by David Braben

Most of us in the industry have been watching the unfolding situation between Activision and Infinity Ward with a form of 'rubber-necking' horror, as this depressingly spectacular train crash unfolds in slow motion. The quiet period we're in now, and going to court or settlement, can be an anxious time. It is especially unpleasant for those directly involved, but many are concerned whether it will be damaging for the whole industry.

Personally, I suspect the long term outcome will be positive for the development side of the industry as a whole, and quite possibly for Zampella and West, though they will have a year or two of misery beforehand, for which they have my sympathy (lawsuits are always unpleasant, even when you win in the end).

CORPORATE HARMONY

At the root of this is the implication that the board level management of Activision don't value their development teams, or even understand what it is those teams care about. I suspect the success of Treyarch with their own *Call of Duty* games has cemented an opinion amongst the Activision board (and perhaps investors) that it is the brand 'they' (i.e. the board) created with marketing which sells games, and not the quality of the games themselves. The brand or sequel effect clearly does make a big difference, but the reason it makes that difference is the expectation of quality created by a previous game or brand.

The alternation between Infinity Ward and Treyarch producing *CoD* games in the past was very effective at capitalising on this effect and spreading the 'fairy dust' initially created by Infinity Ward. At the start of this process, Treyarch was very much in the shadow of Infinity Ward in terms of quality (apologies to those involved), but with time they have improved hugely, in my opinion, and I imagine they can now carry the *CoD* brand successfully themselves going forwards, and the great bulk of players that don't follow gaming news sites will simply not notice.

Having said that, woe betide the brand if Treyarch goes the way of Infinity Ward – though to be honest, that seems unlikely. I'm sure those at Treyarch have nervously wondered what the future might hold for them if they want to work on something else too. I suspect it will be different, though, and they will be treated as Activision's new best friends, at least until another potential torch-bearer is in place.

Activision's battle with the founders of the studio that created Call of Duty is painful – but has potential to prove a point about developers' talents

> ***"I suspect the long term outcome to Activision's legal battle with Infinity Ward's founders will be positive for all developers in the industry."***

Nevertheless, there is a wider point here. This whole saga is not about people moving on after a project – it is about corporate disloyalty. It is about giant organisations not fully appreciating where their long-term value comes from. They have let some of their 'seedcorn' go, and the impact won't show on their bottom line for a fair while, probably beyond the short-term window many listed companies are forced to operate within, but it has certainly damaged their reputation inside the industry. EA, however, have been very smart in their response and in a couple of year's time I suspect Activision will rue the day.

Whatever happens now, Infinity Ward as it was, is dead. The 'brand' may live on, but a company is the sum of the talents and efforts of its staff. Without the key senior staff who have left it is now a different company, and at the very least will need those people replacing – either by promotion from those remaining, or from outside. That is not to say that those others might not do a really good job of making it work, but it will have a different mindset, a different approach, a different balance of experience. Tools and tech will carry over, but a company is a lot more than that. Give me Respawn, any day.

The positive long term effect I think it will have for development is in the eyes of investors. Hopefully what has happened will be seen (with hindsight) as a mistake by Activision, irrespective of the narrow rights and wrongs of the case itself, and it will encourage better treatment of development in the future. The more interest in development those investors take, the more care companies will show. EA's response has been very positive, even if part of the reason was to put one in the eye of Activision. I (as I'm sure many others do) hope that Respawn's first game is a conspicuous success, as that will help all of us in development.

Good luck to them!

David Braben is the founder of Cambridge-based Frontier Developments. Best known as the co-creator of *Elite*, Braben has contributed to, designed or overseen a number of other projects including *Frontier: Elite II*, *Dog's Life*, *Thrillville* and *LostWinds*. Frontier is currently developing its next title, *The Outsider*. Braben is also closely involved with Skillset.
www.frontier.co.uk

COMMENT: INDUSTRY

The Freedom of Limits

by Ben Board, Microsoft

At the heart of creative industries like ours lies a wonderful paradox. We create by taking away.

We take a tree of infinite possibility and prune off vast pieces until our brain sees a shape it likes. Some of these shapes, these pleasing structures, we've learned before, and seek out with our secateurs. Others we discover on the way. Some are fashionable and fleeting, and some are ancient.

I've been downhearted baby, ever since the day we met/
I've been downhearted baby, ever since the day we met/
Our love is nothing but the blues
– baby, how blue can you get?

To be clear these are B. B. King's domestic problems, not mine. The Blues is one of the world's most enduring musical genres, but from the limitless harmonic options it picks just three chords, and from the set of all possible English sentences available for line two, he just repeats line one. Shakespeare's preferred structure was the five da-dums of iambic pentameter:

Shall I compare thee to a Summer's day?
If music be the food of love, play on

Creativity is not restricted by restrictions. It's a result of them. Art without rules is just noise.

Cryptic crosswords are, at their best, highly artistic, as they impose intriguing rules on the vast domain that is English. Rule zero: provide a set of clues whose solutions are words whose letters interlock in a grid. Then hide solutions behind clues of different types, which you need to learn. In one, the clue has a surface meaning if you read it as a sentence. Elsewhere, one section of a clue is the literal meaning while the rest, if correctly analysed and deconstructed, directs the solver to find substitutions or anagrams that when combined satisfy that meaning. In the best clues the surface meaning relates to the answer, and the very best puzzles have themes which all the solutions follow.

Here are some examples – the answers are at the end:

1. 'Throw shoe! Bugger invaded Iraq!' (6, 4)
2. 'They give tender loving care' (10)
3. (3,3,3,1,4)

What makes a rule? It's hard to say. Musical rhythm could be physiological, and harmony is grounded in physics, but melody?

Colour theory may arise from human optics, but the painter's rule of thirds and preference for rectangular frames, and the storyteller's use of metaphor, allegory, and the three-act structure come from somewhere else.

Art becomes possible when structure is imposed on enormous domains, like the colour palette, or the English language, or the audio spectrum. So, can games be art? Hell yes. We have the two crucial ingredients: practically infinite domains (software flexibility, visual art, human experience etc), and a huge and growing bag of rules to choose from, and not just in the ludic sense: genres, mechanics, IPs, target demographics, analogue sticks, system memory and GPU throughput are all types of limits, rules that direct our creativity.

> ***"Games are are developing an amazing library of rule sets, some enduring and well explored, others emerging and passing all the time."***

We are developing an amazing library of rule sets, some enduring and well explored, others emerging and passing all the time. In design terms, some can be stretched creatively, some not. Players don't like broken rules: enemies spawning in places they couldn't, or this door opens while that identical one doesn't; if I can fire lasers from my nostrils then I ought to be able to climb over that wall. It's a game, so you can have a gravity gun – but if it's a good game, if it picks up this box then it must pick up all boxes like it. A crossword might be frivolous and entertaining, but if there are eight boxes for the answer, the answer needs eight letters.

By all means rebel against the rules – after all, they were born from experimentation – but while doing so, recognise that you're still using them. You can't ignore something without being conscious of it. Even John Cage's 4'33", his three-movement piece of that duration during which the orchestra is famously instructed not to play their instruments at all, is interesting precisely because of its deliberate flaunting of every single rule of music. Poet Elliott Moreton knows the score:

A cardiac patient named Fred
Made a limerick up in his head.
But before he had time
To write down the last line

Shakespeare used his pentametric options: using the 'weak' ending ('to be or not to be, that is the question'), or dropping in the odd trochee or spondee ('now is the winter of our discontent'), and just about got away with it.

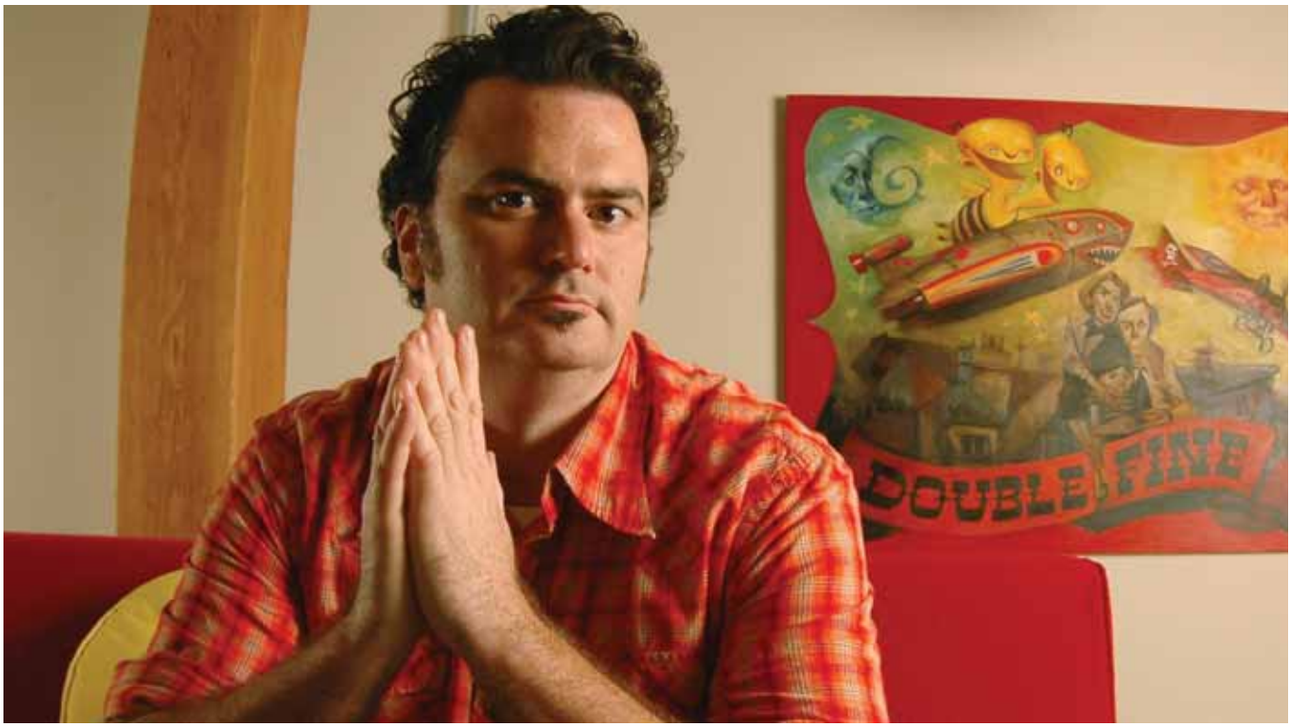
Creativity requires, is defined by, and can only be measured in terms of limits, boundaries, rules, structure, expectations. It's not a photo without a frame; it's not music without rhythm and/or harmony and/or melody. Colour, composition, cadence, and controllers (or their absence) are all skyhooks to lift the creative mind.

Answers to cryptics:
1. GEORGE BUSH. ('Throw' (anagramise) words two and three, and find a solution that 'invaded Iraq', while the surface meaning is a great reference to the news of the time.)
2. TREASURERS. ('Tender' as in cash, see?)
3. HAS NOT GOT A CLUE.

Ben Board is European developer account manager at Microsoft, supporting all studios working on games for Xbox and Games For Windows platforms. He previously worked as a programmer and producer at the likes of Bullfrog, EA and Lionhead.

Something fine

What better way for Tim Schafer to prepare for his speech at this summer's Develop Conference in Brighton than to chat with **Will Freeman**?



Schafer will talk game design in a rare European showing at the Brighton Develop Conference, which runs July 13th to 15th

What motivated you to head to Brighton for the Develop Conference? What do hope to take from the event?
The people running the Develop Conference made me an offer I couldn't refuse. And they said UK audiences are so polite that they will laugh at my jokes even if they are not funny. Also, they said there was good taffy at the Brighton Pier. So I hope to take some of that away from the event.

And what topics do you plan to tackle when you speak at the Develop Conference?
Hopefully I can pull an insight or two from the last 20 years of making games that will be helpful to people. Otherwise, I'll just look like a complete idiot up there. But that could be good, too, because people will be inspired – "If that idiot can make it in the games industry, then so can I!" If all else fails, I know some yo-yo tricks.

Brütal Legend's game world was a fantastically rich one, with an interesting collision between the genre of fantasy and metal LP covers. Could you shed some light on the kind of design process gives birth to such a depth of detail?
Start with an idea that really inspires you personally – for me that was Heavy Metal. The music, the personalities, the clothes, and the album covers – it's a rich source of material and I love it all. So that motivated me and gave me most of my ideas for the game. It's important to start from a place of personal inspiration, because games are hard to make, and when the going gets tough you'll want something you can hang on to and say, "Oh yeah. That's why I'm making this game."

> ***"It's important to start from a place of personal inspiration, because games are hard to make, and you'll want something you can hang on to."***

What do you think about dynamic storytelling's possible renaissance as a result of Heavy Rain? Do you see it as applicable to the kind of games that Double Fine make?
I never thought dynamic storytelling ever went away! *Heavy Rain* is definitely an interesting game. It's nice to see a game try out something new like that. I think we'll be trying out new ways to tell stories for as long as we have a games industry.

Can you see yourself getting involved with the ongoing boom in small-scale iPhone and browser-based games?
Some of the recent downloadable games have managed to retain their big-game production values, and I think that is really interesting. Just because you want to play a short game, doesn't mean you want to play a cheap-looking game. I think there is a big future in small, beautiful, well crafted games. I can see Double Fine making all kinds of games. Give us enough time and we'll try everything.

How do current technological developments in games design inform your creative decisions? Does this side of the industry still excite you?
I am usually more excited by creative ideas on the design side, and when it comes to tech like new controllers I take more of a 'wait and see' approach. Except I am very excited about Natal. I think if Natal is a success, it could open video games up to a whole new market. And possibly cause me to lose 30 pounds.

Most of your work is famed for being funny. Why do you think it is that the majority of game developers seem to shy away from comedy?
Risk aversion is a big part of games production now, and adding comedy to a game is always risky. Whenever you write a joke there is always the risk that people won't laugh, and that's scary. Or maybe they just know something I don't.

Do any areas of the games industry or games design right now make you despair, or are you still optimistic about the sector?
I think it is still the case that if you work hard enough you can get any game made you want, or make any game you're working on a great game. And because of that I am still optimistic about the games industry. As long as there are new people entering the industry every year who are willing to challenge people's expectations about what a game can be, then games have a bright future.

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NATURALMOTION

NaturalMotion is a leading game technology and development company based in Oxford (England) and San Francisco (California). The company's award-winning euphoria engine is a break-through in real-time character animation and is used in AAA titles such as Rockstar Games' Grand Theft Auto IV, Red Dead Redemption, and LucasArts' Star Wars: The Force Unleashed.

NaturalMotion's other run-time animation product morpheme is the industry's first graphically authorable animation engine. Customers include Ubisoft, Activision, Bioware, Eidos, THQ, Codemasters, Ninja Theory, Disney and many others.

In addition to its technology business, NaturalMotion's games studio (NaturalMotion Games) is developing highly differentiated next-gen console and iPhone games, such as Backbreaker for Xbox 360 and PS3, the first football game to feature truly interactive and on-the-field game play (due to be released on June 1 2010). The iPhone version of the game has become one of the most successful sports games on the device, with 1.9 million downloads and counting.

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DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

The rise of the UK indie developer

p24

A rare Q&A with Japanese studio Cave

p32

15 companies reinventing development

p20

Going Dutch

Develop visits Holland to find out how the local games industry has thrived and grown, p28

GAME CHANGERS

There are a lot of lists naming the best or most powerful companies in games. But sales figures, success and heritage only tell part of the story for interactive entertainment's constant evolution. In this special feature, **Develop** provides a run down of the 15 key companies you need to know. Some are already spurring huge changes, some are on the cusp of greatness. Some you will know, some you won't. Some are big corporations, some are small units. All of them, without doubt, are trying to reshape the games business in their own special way…

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Channel 4

NOT ONLY HAS Channel 4's Education department reversed the reputation of learning-focused games as creative works; it has championed the potential of innovative UK indies, and courted the approval of organisations like BAFTA for its effort.

Recognising games as a worthy rival to television in terms of curricular potential, the broadcaster has commissioned daring, hilarious projects from energetic UK studios like LittleLoud, Six To Start, and most recently Zombie Cow, which is behind STI-themed sex education shooter *Privates*.

Not afraid to address sensitive issues including mental wellbeing and religion, Channel 4 Education has proved to the games industry there's a lot more to the media firm than Hollyoaks and Big Brother. It doesn't just have idealistic aspirations – it has the right games in the works to show it means serious business.

Google

GOOGLE IS MAKING its way, slowly but surely, into games.

The recent opening of its Google App store, which links both proprietary elements like its Chrome browser with fellow 'Game Changer' (*see below, left*) Unity was the latest step. The move was effectively the full stop in a sentence that has seen the web leader begin a range of experiments from the launch of mobile OS Android through to customisable game themes for users' iGoogle homepages.

But it's actually not these games efforts that show Google continuing to facilitate changes in our industry. It's the more basic services like Google Docs (and even the still unproven likes of Google Wave) that are key. These are encouraging collaboration and sharing, but best of all they are free – a real boon for smaller teams and distributed developers.

Unity Technologies

IF THERE IS one tech company that helps define the way game development has changed in recent years, it is Unity.

In just a decade the engine company has established itself as a firm favourite for developers large and small, and arguably it plays the poster boy of the iPhone and microstudio revolution.

As well as courting the affection of over 130,000 registered users (the firm even runs its own conference, Unite, forthem), Unity also strives to democratise game development without sacrificing quality. To that end, the company – which tripled in size last year – recently released a free version of its main engine.

Currently poised to release the third version of Unity, the firm is well respected, and continues to work with everybody from EA and NASA to students and hobbyists.

> ***"Google's online tools are encouraging collaboration and sharing, but best of all they are free – a real boon for smaller studios and teams with a distributed workforce."***

Allegorithmic

IF GAMES ARE getting bigger all the time, Allegorithmic is finding ways to make them smaller and more nimble.

Most renowned for its Substance procedural texture rendering middleware, Allegorithmic has proved that highly specialised tech and tools can have a significant effect on the entire ecosystem of online game development. Its ProFX and Substance tools allow game makers to work with texture files between 500 and 1,000 times smaller in memory size than usual, freeing up resources and bandwidth. Newer tool Substance Redux bolstered the tech house's offering, allowing online game developers reduce download size during beta or even post-release.

Allegorithmic impresses, but don't just take our word for it. Partnerships with the likes of Intel, nVidia, Sony and Microsoft show it has the ear of those in the know.

Epic

UNREAL ENGINE 3 is an industry goliath. It seems like it is licenced more than liqour. It's everywhere and anywhere.

Just think about what we would have had to go without had UE3 not been around. *Batman: Arkham Asylum*, the *Mass Effect* franchise, *APB*, the *Gears of War* franchise, *Rainbow Six: Vegas 1 & 2*. The list goes on – it's a who's who of some of the major studios and their titles in recent years, and that's no accident.

It doesn't end there, either. UE3 has also become a major product in the film idustry, with some of the licensees for CG amination including Warner Bros., Buena Vista, Columbia Pictures, TriStar Pictures and Sony Pictures Entertainment.

What wraps all that up into direction-changing momentum today is the UDK, which makes all that power accessible to anyone with the inclination. If Epic gets its way, the indie scene could be just as influenced by UE3 as the triple-A one.

The gaming industry wouldn't crumble without Epic, but it certainly wouldn't be the same.

amiqus GAMES

Lightning Fish Games

FOUNDED IN 2008 by industry veterans Simon Prytherch, Mike Montgomery and David Hunt, Lightning Fish specialises in creating motion-tracking technology titles aimed at the ever-expanding family gaming demographic.

What makes the Oxfordshire-based studio interesting is its impressive use of video content – a formular already mimicked by Ubisoft's *Just Dance*. Lightning Fish' s first game, the *NewU Fitness First* was a statement of intent in what has fast become a crowded genre – but the upcoming sequel (which will no doubt make use of Natal and Move) will help cement its position as one of the UK's brightest independent studios.

And in championing the fitness and wellbeing genre, Lightning Fish has proven that a true indie can play rival to Nintendo and its hugely popular *Wii Fit* IP.

nDreams

BEING A START-UP company in games business can be a daunting thing. Established studios look down from on high in a market that can all too often lean favourably towards the instantly familiar. Around here you need to carve your name fast, and you need to carve it well.

nDreams has been showing very little fear since its founding in 2006. Developing and publishing where others fear to tread, the company is breaking ground in digital distribution and unexploited markets.

Founded by former SCi/Eidos creative director Patrick O'Luanaigh with a remit of focussing first and foremost on digital gaming, the firm is currently best known for the world-first, genre-bending single-player alternative reality game for Playstation Home titled *Xi*. Over five million Home users have visited the *Xi* spaces so far.

But that's not all, it is launching Facebook games like *Spirit of Adventure* – billed as the 'first social networking soap opera' – and is even collaborating with Reebok and F1 star Lewis Hamilton on an ARG.

In an industry known for being at cutting edge of entertainment and its consumption, it is good to know that someone has their sights set firmly on the future.

> ***"The Xbox Indie Games Creator Community – which vets games pre-release – is what really shows how Microsoft has delivered on Live's promise."***

EA Partners

NATURAL LAW DICTATES that complex systems are successful ones. EA gets this, and EA partners was born out of it.

An in-house co-publishing arm that distributes titles developed by third-party developers, it is helping independent studios who would otherwise be a rival to EA and its biggest franchises. Oh, and it's bringing in a pretty penny for EA in the process.

Crytek's *Crysis*, Valve's *Orange Box*, Epic Games' *Bulletstorm*. All these titles are co-published under the EA partners label. Recently, Insomniac Games also declared that it will be breaking away from their PS3-focused past to develop a multi-platform title via EAP as well.

EA Partners will also be publishing titles with the recently-founded Respawn Entertainment, formed infamously by ex-Infinty Ward heads Vince Zampella and Jason West.

By condoning IP retention, independence, stable relationships and allowing studios to have a say in the marketing and publishing strategy behind their games, EAP's set-up is now being copied by the likes of Activision and THQ. But it's too late for them: the balance of power between publishers and developers has already shifted towards the latter, driven by the very deals EAP encourages.

Xbox Live Indie Games

THE XBOX LIVE Indie Games service, which now plays host to over 1,000 titles, has afforded fledgling developers the opportunity to see their work appear on the most popular online console service alongside a wealth of big budget triple-A releases.

The channel provides a platform for games created using Microsoft's XNA toolset and managed runtime environment. In time it has helped teams and individuals from all walks – including those outside of games development, even journalists – the opportunity to create games sold to real consumers for MS Points.

Sure, there are dobuts about an 'indie ghetto' on the console and the usefulness of XNA, but it's the value of the Creator Community – which tests, reviews and vets games pre-release – that finally shows how Microsoft has delivered on Live's promise.

XBOX LIVE indie games

Gaikai

CLOUD BASED GAMES that can be embed into any website, blog or browser and played from a single server farm? Sounds too good to be true. Nevertheless Dave Perry, the man behind upcoming streaming tech Gaikai, knows the industry, knows the technology and demoed Modern Warfare, World of Warcraft, EVE, Spore, Mario Kart 64 and Adobe Photoshop all running in a simple Flash player to prove it.

Gaikai has already procured massive investment from big venture capital firms and tech investors like Benchmark Capital.

The proof will come in time, of course. And while the potential for cloud services to revolutionise gaming is as massive as the potential for it to fail, it is only with risky ventures that the greatest advancements are made. Which makes an ambitious firm like Gaikai one to closely watch.

GAIKAI

Foursquare

BECOMING THE MAYOR of your local Starbucks may sound a little uncool, but in terms of altering the way people think about social networking and its relationship to achievement-based gaming, Foursquare is pushing boundaries.

A location-based social networking website, Foursquare is not a game by name, but it sure behaves like one. Users check-in at venues using text messaging or location-aware apps and are then awarded points and badges. The person who visits an individual location the most becomes the 'Mayor' of that area.

The idea is simple, but it has generated massive interest. The service itself has almost one million users and rumours says Yahoo is offered as much as $125m to buy it. Associated iPhone, Android, webOS and BlackBerry applications are available, with a Maemo app in early development stages.

Where this line of casual play changes things is in its special use of real-life locations to encourage devoted behaviour on viral social networking mobile apps. Foursquare is a game that doesn't need playing and one, if you go by Twitter, a lot of developers are already enjoying. It won't be long until an actual video game makes a bid to capture the same energy and excitement.

OnLive

ALTHOUGH PITCHED BY some as similar to Gaikai, philosopically OnLive is more Apple to Gaikai's Microsoft. It's a format-holder-like, ambitious cloud gaming service that launches this month with big backing.

Electronic Arts, Take-Two, Ubisoft, Epic Games, Atari, Codemasters, THQ, Warner Bros., 2D Boy and Eidos Interactive have all signed up to have their PC games available on the service, lending OnLive a considerable weight of experience and inherent quality. Having British Telecomm as a minority stake-holder doesn't hurt, either.

OnLive matters because, one way or another, cloud gaming will have a place in video games. And whatever form this sector ultimately takes, you can't deny OnLive has helped kick-start and draw attention to it.

Connect2Media

APPLE MAY GRAB the headlines when it comes to mobile. But the company itself doesn't exactly deserve a space on this list for just building the train tracks. The real companies to champion are those driving forward in the space.

Hence our choice of Connect2Media, a division of Manchester-based Mforma. This mobile games firm has developed, published and distributed a raft of titles for iPhone, Android and Symbian. So far so typical.

Yet it's Connect2Media's new efforts to launch subscription services for mobile games in the West – like those available in Japan – that shows real promise. Key acquisitions earlier this year are helping it build a business that will bring new delivery, micro-payment and business models to gaming apps. And not just iPhone apps – all handsets.

> ***"Metacritic is now the games industry's own objective voice; the unflinching global review that publishers cannot touch."***

Bigpoint

THERE'S NO DENYING digital distribution is one of the forces empowering numerous firms on this list – and Bigpoint's gaming portal stands as the best example of how the future of gaming is online.

The German firm runs one of the top three gaming portals in the world and is a publisher, content provider and developer all in one, showing just how much convergence represents the best oppourtunity for studios to make a profitable business in difficult market circumstances.

While the likes of EA Partners are decenteralising the production process, Bigpoint shows a developer taking charge of the whole chain.

As the idea of just what exactly is a video game, and just who is a gamer, gets harder and harder to define, the firm is a trail-blazer into different offshoots of what was once such a simple business.

Metacritic

THE GENUINE VALUE of mass score aggregation may be disputable, but the impact of Metacritic – like it or not – is undeniable.

Metacritic flies in the face of assertions that you can't quantify class. It takes the barrage of noise made by game reviewers all over the world and condenses it all into a clear, single number.

Providing simplicity amid such diversity is the key to its success online, and in an industry where hype plays a dominant role, Metacritic has become the industry's own objective voice; the unflinching global review that publishers cannot touch even with the deepest reserves of money.

The ties between Metascores and sales volumes is not fully established – with the highest-ranking games typically enjoying huge promotional campaigns from confident publishers – yet when companies base business goals on one website's archive of numbers, you know there's real weight behind it.

Independents' Day

With the World of Love indie development conference drawing close, **Will Freeman** caught up with the independent studios and individuals currently making waves…

Above: Upcoming Hello Games racing title Joe Danger

How did you come to be an indie developer? Was it through necessity or choice?

Simon Oliver, founder, HandCircus: I guess It's really a combination of the two. My background is in digital design – for the web and installations – but my passions took me towards game development. I'd spent a couple of years learning, prototyping and trying to get into an established game studio, but having no previously published titles under my belt proved to be a significant stumbling block. 2DBoy with *World of Goo*, Jonathan Blow with *Braid*, and the Media Molecule guys were a huge inspiration, giving me the confidence to go it alone and set up HandCircus.

Sophie Houlden, developer of BOXGame: It was a choice for me, I originally wanted to go the traditional route and go to some big company and work my way through the ranks to a lead designer position, but at university it dawned on me I didn't want to wait before making the games I wanted to make, and there was the very likely outcome I wouldn't ever get the position I wanted, and I certainly didn't want to compete with co-workers for it.

Amy Casson, developer, Littleloud: Definitely through choice. After graduating I started out as an e-learning flash developer and was soon itching to be involved in more creative projects. After looking at local opportunities, I realised that Brighton-based studio Littleloud produced exactly the type of high-end content that I wanted to be involved in. I've currently been with them for three years.

Alex Amsel, CEO, Tuna: We started in 1996 essentially as an indie developer. We've worked on many titles since then but felt that we should return to our routes and create our own IP. This was for both personal and business reasons.

Sean Murray, managing director, Hello Games: It was definitely by choice, but I would describe striking out on my own as something I needed to do. It's something I've wanted to do since I was a child. Having worked at much larger companies like EA and Criterion, it became a raw need to find my own path. I think that's the same for everyone at Hello Games.

What do you think are the key benefits of working as an indie developer in the modern games industry?

Murray: Games development has grown up very quickly and seemingly settled into a lot of very predictable routines of sequels and licences. Developers seem to often find themselves in that work-for-hire cycle, creating games to hit milestones. Being independent we can circumvent that. It seems crazy, but for the first time since joining the industry I'm thinking about the kind of features I want to add, for the people who will want to play our game.

> ***"I love the freedom and the flexibility. Our team is small, our costs are low, we can afford to take our time crafting a game we are really happy with."***
>
> Simon Oliver, HandCircus

Casson: As a result of working in a small company, where I am one of three developers, I am given ownership of the projects I work on from a development perspective. Consequently, I am continuously challenged and my learning curve is always steep - I find this set up extremely rewarding and ideal for personal development.

Amsel: The key benefit is that we get to work on the products that we want to. In addition, we can work to the methodology that suits us best rather than the various constraints and time scales put upon us by clients.

Simon: Two of the things that I love the most about indie development is the freedom to create, and flexibility in the process. Our team is small, our costs are low, and so we can afford to take our time in crafting a game that we are really happy with. On most occasions, our games have changed significantly during their development lifetime, and in a more

INDIE SPIRITS

Sean Murray, managing director, Hello Games
Four-man team Hello Games is already courting enthusiastic attention for its first game *Joe Danger*
www.hellogames.org

Alex Amsel, CEO, Tuna
As well as having handled several licensed projects, Sheffield indie Tuna is also at work on claymation run-and-gun *Cletus Clay*
www.tunatech.com

Amy Casson, developer, Littleloud
Multimedia powerhouse Littleloud has created a huge range of licensed games along with its animation output
www.littleloud.com

Sophie Houlden
Houlden is the sole member of a true microstudio, and has created a wealth of titles including Unity-built *BOXGame*
www.sophiehoulden.com

Simon Oliver, founder, HandCircus
East London's HandCircus is behind the renowned iPhone game *Rolando*, as well as its popular sequel
www.handcircus.com

From Left: Tuna's Cletus Clay, Hand Circus' Rolando 2, Littleloud's Tronji and Sophie Houlden's Sarah's Run

traditional project framework, it would have been a real challenge to steer the project in this new direction.

Houlden: The obvious one is freedom, I can do whatever the hell I want, take any risk I want. If my game sucks; who cares? Each day I feel like working on something different, sometimes it's something pretentious and arty, sometimes it's cheesy with lots of explosions, sometimes it's totally random and I'm just playing with game mechanics like they are toys. But they are all valuable because of the other main benefit: Ownership. Each and every game I make is mine, and when people are playing with it they are playing with me personally on some level. It's great to be able to say 'I made this' instead of 'I made bits of this'.

Many observers today paint a picture of the indie scene as the place to be as a developer, but what are the challenges for indies in the sector?

Houlden: Personally, the biggest challenge is money. It is the root cause of every other problem, and I think you feel it a million times harder as an indie. If money wasn't a problem I would be able to spend an infinite amount of time on my projects, and I could follow out each whimsical idea I have to its conclusion.

Amsel: Same answer, financial. A one or two man team has very different financial requirements than five-to-10 man team. If you're making console games then one-to-two people usually won't be enough. Beyond that, indies have to understand that they need to market themselves and their product, yet it can be hard to find the time.

Oliver: It's certainly crowded. One of the most significant challenges is getting your game noticed. The sheer volume of high-quality titles being released on the App Store on a daily basis means that levels of competition are insanely high. The fact that most indie games have such small budgets (and resources) for marketing and PR compounds the problem. The lack of structure can also present some difficulties, and it can be a challenge to stay on track and stay motivated, particularly if your team is geographically separated.

Is it possible to make a living as an indie developer in the current industry and economic climates?

Casson: Yes, definitely. I'm not able to go on six-week cruises or buy myself a Porsche, but I can pay my mortgage and treat myself to a weekly mocha!

Amsel: Absolutely, but you may need to support yourself for the first couple of years at least. It's risky.

Murray: I certainly hope so, but it's undoubtedly an incredibly risky business. Our development is entirely self-funded and to make *Joe Danger*, everyone at Hello Games has had to make incredible sacrifices, both financially and personally. More than any developer, we rely completely on the success of our games to allow us to keep doing what we're doing.

The fact is that looking down the list of top-selling download titles, the majority are coming from indie developers. Hopefully that shows the potential for success. It's the ultimate commercial democracy though, if gamers like what we do, we can afford to give them more. If they don't, we probably won't be here next year.

Houlden: I can't really speak from personal experience, but I know plenty of indies that do get by. I'm working on my first commercial game and my hopes are that I make enough to not be a burden on anyone, and often I lay awake at night thinking my hopes are too high, but I wont know unless I try.

> ***"If money wasn't a problem I would be able to spend an infinate amount of time on my projects, and I could follow each whimsical idea I have to conclusion."***
>
> Sophie Holden, solo developer

While on the subject of finance, how easy is it today to access suitable technology and tools?

Houlden: Really easy, and it's only ever getting easier. Looking at all the software I use for making games, I've paid £30 total – not including OS – and that was a personal luxury. You can totally make high quality games with just free software. It's no longer a case of 'you get what you pay for' with tools.

Oliver: The majority of our tech and tools are either open-source or created in-house. The availability of high quality open-source libraries such as Box2D, Bullet, Ogre, Recast has been amazing for us and has allowed us to keep budgets down, and given us the opportunity to focus more on game creation than tech. Commercial libraries and engines are certainly getting more indie-friendly though. And hats off to Unity - their platform really is awesome.

Casson: At Littleloud, we assess on a job-by-job basis, the most suitable software that will deliver the high end quality content we are after. We mainly use paid toolkits such as Flash and Unity, but these are often used in conjunction with an array of fantastic free resources that aid and speed up our development process

Amsel: I don't think tech or tools are problematic. Few indies are going to be making massive, complex games and there are plenty of Open Source tools around right now. Access to console hardware and console distribution systems is a much bigger problem however.

Is it easy to meet and work face-to-face with your fellow indies? Are you involved with any 'community projects' that prevent professional isolation?

Oliver: Conferences are obviously great for this, where you really do get a chance to meet a ton of people at the same time, though its been fun popping in to see some of the other indie guys nearby.

Murray: We try to get involved anywhere we can. It's a huge relief just to be able to pick another developer's brains, or discuss your current ball-ache. Something we definitely noticed as part of the Independent Games Festival at GDC was that meeting and collaborating is something the US indies are far better organised at. There is a very tight-knit community there. As the only UK representative at the IGF, we felt a certain jealousy of that, but it's something I'm definitely keen to see grow here in Europe.

Houlden: Sadly I live in a really scenic beautiful location, great for when I want to look away from the computer screen, not so great for bumping into others who like to look at computer screens. That said I've found indies online are super tight. We help each other out at every opportunity; just look at the credits list on an indie game, you will likely see a whole bunch of other indies there under the 'thanks' bit.

Do you feel that modern indie devs get a fair amount of recognition for the work that they produce?

Murray: I think we're very lucky to work in an industry where there is a very vocal, progressive and seemingly popular collection of underground websites that go out of their way to unearth and support the indie movement. Gamers and the community at large are always surprisingly receptive and respectful of the smaller outfits.

Oliver: The prominence of indie scene continues to grow, thanks in no small part to the huge efforts of the IGF committee and many, many other members of the community. The IGF awards felt enormously glamorous this year as well. I think the recognition is definitely out there right now, and the scene is well covered in games journalism, both online and in print.

Casson: Fundamentally, in interactive space, there is a culture of indies escaping credits and appearing faceless. However, this model is changing as the gap between TV and interactive content is merging - often allowing TV style title sequences and opening credits. The level of recognition we receive is very much project based. This ranges from us including these opening credits down to remaining completely nameless under a white label agreement.

WORLD OF LOVE

London, UK, June 25th

The first ever World of Love independent game developers conference will take place at Channel 4 headquarters in London on June 25th this year.

Confirmed speakers include developer Terry Cavanagh, Sean Murray from Hello Games, creator of Rolando Simon Oliver, and experimental developer Stephen Lavelle.

The event will include discussions of the most important issues to indie developers today, such as technology, effective marketing, publishing routes, and above all, game design.

www.worldoflove.eventbrite.com

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Jonathan Smith, Development Director, Traveller's Tales

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John Dennis, Design Manager, Team 17

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The Speakers

Here's a preview of just some of the sessions:

KEYNOTE

Dr. Ray Muzyka
Group General Manager, BioWare Group
and Senior Vice President, Electronic Arts,
and Co-founder and CEO, BioWare

Dr. Greg Zeschuk
Group Creative Officer, BioWare Studio Group,
Electronic Arts Vice President,
and Co-founder of BioWare

The superstar developers and founders of BioWare – the studio responsible for the hugely successful titles Mass Effect and Dragon Age, will be making a rare appearance in Europe as they give this year's opening keynote.

KEYNOTE
Whodunnit: Bringing Dr Who to a PC Near You
Simon Nelson, BBC Vision
Sean Millard, Sumo Digital
Charles Cecil, Revolution

PRODUCTION
User Research: Turning Design Vision into Player Reality
Jerome Hagen, Microsoft Game Studio

KEYNOTE
Traditional Games Breaking into Social Networks: A View from the Frontline
Louis Castle, Instant Action

EVOLVE
An Android Game Post-Mortem
Chris Pruett, Google Japan

EVOLVE
A Casual Game in Every Pocket
Dave Bishop, PopCap

KEYNOTE
The Future IS Controller-Free Games and Entertainment
George Andreas, Rare

DESIGN
Enslaved to the Story: When Ninja Theory Met Alex Garland
Tameem Antoniades, Ninja Theory

THE DEN
Sex, Brawls, and Magic Duels: Console Game Design Beyond the Television Screen
Dajana Dimovska, Copenhagen Game Productions
Lau Korsgaard, Copenhagen Game Collective

THE DEN
Why are Games Sequels So Often Better Than Film Sequels and What This Can Teach Us About the Development Cycle
Tom Rawlings & Ana Kronschnabl, Fluffylogic

KEYNOTE
The Highly Anticipated Sound Revolution
Adam Levenson, Activision

AUDIO
Source 2.0: What To Do When You Run Out Fresh Material
Ben Minto, Electronic Arts

CODING
Dealing with Complexity
Peter Hall, Crytek

CODING
Vectors of Performance in Gaming
Steve McCalla, Intel

ART
Homespun Fun – The Art of Kahoots
Ricky Haggett, Honeyslug

ART
Pet Tricks – The Technical Art of EyePet
James Answer, Sony Computer Entertainment Europe

KEYNOTE
Jagex's Indie DNA: How Jagex Did Everything Right by Doing Everything its Own Way
Mark Gerhard, Jagex

BUSINESS
The Lowdown on Downloadable Content
Chris Bruce, SCEE

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Going Dutch

The land of Guerilla Games and Van Gogh, Overlord and canals, the Netherlands is a noteworthy and expanding force in the international video games industry. **Stuart Richardson** spoke with Dutch developers to find out what life was like making games in the low countries…

Right: The critically-acclaimed and award winning Killzone 2

Received wisdom has it that art and business are clearly deliniated enterprises; the artist creates, the businessman pedals.

The entertainment industry has rarely questioned this notion. The writer is considered the artist and the agent, the businessman – as with the director and the producer, the musician and the manager, the developer and the publisher.

For the Dutch, art and business are not mutually exclusive. Historians widely consider the Netherlands the original capitalist nation; the Amsterdam Stock Exchange was a world-first upon its founding in 1602.

Artists – and in particular painters – were a cause of and later driving force behind this groundbreaking economy. Johannes Vermeer lived and died by its peaks and falls. Van Gough is one of the most influential artists to have lived, and still one of the most profitable Dutch exports going.

All of this bodes well for the video games industry in the Netherlands, currently growing around 50 per cent faster than any other industry in the region. The blurry line between creative enterprise and business is one familiar to everyone 'in' video games, but few peoples can boast the level of experience with the it that the Dutch can.

Peter de Jong, founder and CEO of Rotterdam-based casual games studio Codeglue, agrees.

"Traditionally the Netherlands is known for its creative industries. Just look at the design industry, or all the famous national painters. The Dutch games industry is just a contemporary addition to this," he enthuses.

"The big advantage of having a Dutch studio is that you can tap into a huge well of creative talent already here."

Herman Hulst, MD for Killzone studio Guerilla Games, also believes the history of the Netherlands points towards a bright future for games development in the region.

"Culturally, the Dutch form a non-hierarchical society where people are used to sharing power," he explains.

"This is ideal for companies that operate in teams, and it taps into the creativity of the group as a whole."

Maarten Brands, the co-founder of Amsterdam-based MMO and browser games studio Virtual Fairground, singles out the excellent electronic infrastructure in the Netherlands as another reason the contry has a competitve edge on international development competition. All major worldwide ISPs connect to the Amsterdam Internet Exchange hub.

> ***"Traditionally the Netherlands is known for its creative industries. The Dutch games industry is just a contemporary addition to this."***
>
> Peter de Jong, Codeglue CEO

"The Netherlands is one of the most well-connected countries on the planet today. Despite being a small we are fourth in line for online spending on games behind the UK, Germany and France," he says.

"We are growing fast and have a lot of hands-on experience in online monetisation."

GOVERNMENT ISSUE

EVP of Amsterdam-based publisher Playlogic Rogier Smit says the various support packages available to companies and individuals working in the video games sector in the Netherlands as a huge contributing factor to the relative health of the industry.

"Development is well supported by the government here. They offer certain tax breaks, providing support for technology and innovation and this is known as the WBSO – The Act for Promotion and Research Development," he explains.

"There is also a regional stimulation package available called 'Pieken in de Delta' and this helps fund the Dutch Game Garden, which provides a range of support services for new companies, from finding office space to assisting in hiring."

Harking back to the idea that the Dutch have historically always understood the ties between business and art, Smit also explains the WWIK – a form of income support in the Netherlands for all young artists and

Playlogic Entertainment

LOCATION:
AMSTERDAM

HEADCOUNT:
110+ (300+ EXTERNAL)

SPECIALITY:
LARGEST PUBLISHER IN THE NEATHERLANDS

Playlogic are an independent publisher of entertainment software for console, PC, handheld, mobile devices and other digital platforms.

Based in Amsterdam, the Netherlands, the firm publishes titles developed by other studios and through the Playlogic Game Factory – the firm's in-house games development facility.

"Finding experience in the Netherlands can be difficult. Traditionally the first countries publishers will look to for development is the UK or the US & Canada, where games development is a major part of the commerce and where the larger triple-A studios are based," says studio head Olivier Lhermite.

"But there is a great sense of community. Our industry is so small that everyone knows each other, and we all move in the same circles."

Around 110 permanent staff work at Playlogic, responsible for distributing, selling, licensing, PR & marketing and product development for the company.

"The whole Dutch development community continues to grow in both experience and maturity," Lhermite adds.

"At Playlogic the staff are pan-European. We have people here from the Netherlands, France, Belgium, Poland and Germany to name a just a few."

The Playlogic Game Factory itself, based in Breda, employs around 80 staff to develop titles across the current generation of platforms. The PGF is also a first party contractor for SCEE.

The company's principal source of revenue comes from publishing, with the firm retaining most of the IP that they publish after creating or aquiring it.

"The Dutch can be very frugal at times," warns Lhermite.

"When it comes to budgets and costs, people here will not waste money unnecessarily. There is a great willingness to break out into new areas, however – to test new ideas and concepts and see where they take you."

www.playlogicgames.com

From top: Peter de Jong (Codeglue), Rogier Smit (Playlogic), Herman Hulst (Guerilla)

Herman Hulst and Arjan Brussee, Guerrilla Games studio heads

designers, including those involved in the games development industry.

"The Dutch Ministry of Economic Affairs supports the 'Dutch Games Go Global' initiative, which helps Dutch developers expand into markets like the US and Japan. Subsidies for games development is better

> ***"Development is well supported by the government here. They offer certain tax breaks under a technology act known as WBSO."***
>
> Rogier Smit, Playlogic EVP

elsewhere, but in the Netherlands there is a deeper understanding of the issues facing developers," he adds.

Executive digital producer of Media Monks Joris Pol points towards what he sees as strong links with local education as another reason for the continuing good performance of the Dutch industry. With an estimated 1,500 people working across 100 studios, video games have become a significant national employer.

"Most companies work together with schools on some level. We give regular keynotes, classes and help out with work placements," Pol affirms.

"The biggest challenge for any company in our line of business is finding great people, so it's imperative to stay connected to new generations of developers and designers."

CCO of Almere-based mobile games studio Rough Cookie Erik t'Sas agrees with that sentiment, but describes the relationship as one that needs to work both ways.

"In the Netherlands there are over ten game-related educational programs across the country. We believe that input from the industry itself is essential for games education," he says.

Dittmar Tukker, CEO of Gamedia – an online games studio located in Altmaar – has high priase for what he believes are congienial relationships between Dutch studios that foster an overall atmosphere of friendly rivalry.

"I really can't imagine that there's another country in the world where the community is as friendly as in the Netherlands. Most studios are doing great because the game business is one of the fastest growing industries here," he adds.

Tukker also hints that he prefers the idea of Netherlands developers continuing to work at the level they currently operate at, and not expanding for the sake of it.

"That positive climate could change over the years when the industry evolves to a more serious level and the passion for games becomes an obsession for making more money," he warns.

Lead artist at simulation specialists Stentec Software Daniel Kuik sees the potential

Killzone's Helghast forces prepare for war

Guerrilla Games

LOCATION:
AMSTERDAM

HEADCOUNT:
130+

SPECIALITY:
LARGEST DEVELOPER IN THE NEATHERLANDS

Right: Triumph Studios' fantasy-satire RPG Overlord

Guerrilla Games is a developer and wholly owned subsidiary of SCEE, based in Amsterdam and headed by managing director Hermen Hulst and development director Arjan Brussee.

Best known for the Playstation-exclusive *Killzone* series, Guerrilla recently confirmed they are working on a third – and stereoscopic 3D – game in the series, though no release date is yet confirmed.

Guerrilla signed with Sony in 2005, and now employ around 130 development staff from more than 20 different countries. The company headquaters is based in a 17th Century mansion in the centre of Amsterdam.

"There isn't a critical mass of talent here that you might find in places like the American West Coast or in the greater London area," says MD Hulst.

"This means that to find specific talent or specific services, a team may have to look abroad. Development today is a global phenomenon."

The studio frequently espouses its commitment to "recruiting, developing and retaining the best talent in the industry make Guerrilla an expert in the 'expat experience'."

"There is a great sense of continuity here, though," Hulst adds.

"Staff turnaround is very low compared to other businesses and studios. Almost the entire leadership of the team has been here from the beginning."

Hulst was also keen to describe a continuing growth and development of the company as a whole, however.

"Over the last few months we have brought on six interns from a new and extremely ambitious school called the NHTV in Breda. Many schools have created games related programs over the last few years, which is great," he says.

"Studios must ensure that there is sufficient opportunity for new talent to obtain some practical skills by offering actual time on game projects."

www.guerrilla-games.com

continuing expansion of the games industry in the Netherlands as a much more positive thing, however.

"I would definately like to see more studios opening here," he confesses.

"The Netherlands has a growing community with great expertise. Our firm has just started to expand into the games market proper, and we would like to see ourselves as a good influence for others considering trying the same thing."

This view seems to be shared across most perspectives in the industry.

"The development circle here has been rapidly evolving as more and more skilled people flock to the Netherlands," says Rogier Smit of Playlogic.

"We expect to see plenty of new small studios opening, closing and consolidating over the coming few years. In the longer term, those who previously left the Netherlands in search of opportunities abroad will likely see a move back as a viable option, given the current landscape."

The annual Utrecht-based Netherlands Festival of Games is also proving the relevence of the modern Dutch games industry. Last year's event was sold out, and attracted a range of big development and related industry names from across Europe; Habbo, Universal, IAB and MTV Networks to name but a few.

MD of Guerrilla Herman Hulst holds a bright outlook for the Dutch industry's future in an interntional market.

"The development community is now very much a global community," he explains.

"That is a very good thing."

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CAVE STORY

In a rare interview with the Western press, a trio of staff from mystery-shrouded developer Cave tell **Will Freeman** why a company famed for making notoriously difficult shmups for arcade hardware has turned its attention to the iPhone…

Cult Japanese developer Cave is far from a typical studio. As one of the world's few remaining games makers focused intently on creating titles for arcade hardware, the ferocious difficulty of its releases is almost as infamous as the high prices its back catalogue demands from collectors.

Mainly known for its seminal work *Dodonpachi* and its focus on the shmup genre, Cave has concerned itself largely with releases for its native market despite being highly regarded by developers across the globe.

Yet, with the recent international release of arcade-to-iPhone port *Espgaluda II*, the company is now looking to new horizons as it turns its attention to Apple's portable, new genres, and the worldwide audience.

Interested to learn more, *Develop* caught up with Cave's game developer Tsuneki Ikeda, and the mobile contents department's iPhone project producer Yukihiro Masaki and project director Mamoru Furukawa.

Cave is famed for incredibly challenging arcade games. For that reason the iPhone seems an unlikely platform for its recent port of arcade shooter *Espgaluda II*. Is that fair?
We can see how you might think that the iPhone is an unlikely platform. When we first started porting to the system, we spent a lot of time just seeing what we could do and how accurately we could reproduce the arcade game. It was within that process that we realised we could achieve the level of reproduction and quality that we were after, and that's one motivating factor for bringing *Espgaluda II* to iPhone.

Another reason is that the iPhone/iPod Touch game market is extremely active, and we wanted a worldwide audience to get to know and play Cave shooters.

Both of these reasons led us to deciding that the iPhone/iPod touch was a platform on which people around the world could easily enjoy our games on.

> ***"Although 2D scrolling shooters are still the mainstream in Japan, overseas we see more top-down arena shooters with multi-directional shots as the mainstream."***

Shooters are surprisingly prolific on the iPhone. Why do you think the platform is so popular with those creating shmups?
Shooters are indeed prolific, but we don't think there are a lot of authentic shooters out there, just yet. I can't say why it's so popular among people making shooters, however they serve as sort of an introduction to programming, and this may be one reason.

Do you have ambitions to bring more ported or original Cave games to the iPhone?
Yes, we have decided to bring more ports and new Cave games to the iPhone, and in fact we are already working on our second and third titles at the moment. I can't tell you the titles of these games yet, but please watch our official site or follow us on Twitter for future announcements.

What were the development challenges of porting from arcade hardware to the iPhone? Are the two similar in any way?
The arcade version of *Espgaluda II* had already been finely tuned, so there was the question of exactly how far to port it. We're happy to say that we were able to port the game without cutting any of the source code or game data, and we think our arcade fans were very satisfied with the results.

***Espgaluda II* is one of your first games to see release on home platforms outside of Japan. How does considering an international audience affect how you design a game when first creating it?**
If by design you mean graphic design, *Deathsmiles II* and *Espgaluda II* were both designed with Japanese domestic users in mind, so we went with a design that pressed human characters instead of 'ships' to the forefront.

However, if we look at shooting games supported overseas – especially North America and Europe – we think that stylish looks like those of *Geometry Wars* and *Rez,* should be taken into consideration.

With regards to game design itself, although 2D scrolling shooters are still the mainstream in Japan, overseas we see top-down arena shooters with multi-directional shots, or full 3D FPS and TPS games, as the mainstream, and we think it may be important to tailor our games towards that direction.

Top: Project director Mamoru Furukawa (above) and prject producer Yukihiro Masaki (bottom) from developer Cave

For the iPhone version of *Espgaluda II*, we did not really think there was a need to take into consideration the differences among countries for a shooter where the basics are shooting and dodging. However, we did put a lot of time into designing a control interface optimised for the iPhone.

What kind of development technology do you use at Cave? Is it proprietary technology or something provided by an external company?
Since this was our first iPhone title, we started by porting the game with the libraries used in the arcade release. In the future we are interested in improving our ability to port from the arcade to other platforms.

Aside from a small number of exceptions, Cave has dedicated itself to one genre. Is creative motivation difficult in that context?
The Japanese shooting market has a long history, and although it may look like there is a lot of demand for major changes to the genre, we feel that the amount of users actually calling for such changes are few. For this reason, there is not a huge range within the game rules that we can change, and there has certainly been people who have had trouble making the same sort of games and moved onto other projects.

But for me, I find the enjoyment there – within that narrow space, how far can we change the game's impressions and feel? There are certainly tough parts in the process but I've never had a problem maintaining my creative motivation.

Is Cave happy to be profiled as a niche developer, or is that something you are looking to change?
We do not think of Cave as a niche developer. We strive every day to read into the future, and hold a high potential that isn't preoccupied with one technology or another.

As a result of having a strong focus, we might have a reputation of being niche by people. We are going to continue challenging ourselves on new platforms so that people around the world can feel 'that's Cave' and we can capture their hearts.

Please watch for our future developments.

Cave's fans are renowned for their abilities as gamers. From a design perspective, how do you create games that cater for such talented players? How do you keep perspective on what the player is capable of?
Since we target different player bases with each title, it's hard to speak broadly regarding this question, however while tuning all of our titles, in general we have plotted out difficult and easier areas at critical points of the game ahead of time, and we watch to see if/when a player plays through these points, whether their play style lines up with our expectations.

With regards to titles which have their main appeal in high difficulty, we have certainly designed the game to appeal to these talented players, but fine-tuning the game is always the hardest part.

Often our fine-tuning process plays out like this: While we adjust the range in which players can create patterns as well as the amount of random chance and the extent to which the player can intervene in terms of 'guiding' bullets around the screen. In the end we apply a wide variety of predictions of how the player will dodge bullets and then consider what the best way would be to combine those projections.

> ***"We create easier game modes to give beginners a sense of accomplishment and fun when they clear the game, but also brutal game modes aimed at dedicated shooting fans."***

When creating and porting a 2D shooter, what elements of the development process really push the professional abilities of your team?
We really think it comes down to the programmer. The reason being that everything about the game comes down to the programmer's ability (taste), including how much fun it is, how well it processes, and how the graphics and sounds we have created are implemented into the game.

The inclusion of 'slow-down' in your games is now something almost unique to shmups. Is that something you simulate, and if so, why do you include it?
Cave's games certainly have their difficult side, wherein there are situations where there are a lot of bullets on-screen. In these situations, we will see slow-down occur where the game speed drops and it is easier to find a route through the bullet patterns.

However, it's not just these situations, nor conveying the sense of dilemma when you have been pushed into the corner while the game speed has dropped, and although this is a simulated feeling, the player experiences a certain sense of 'awakening' and this situation can transform into something satisfying. The meaning of slow-down in bullet heaven shooters is accentuating the difficulty of the game, and containing this potential for difficult situations to become enjoyable.

Most of the Cave titles experience slow-down from hardware, but some of our games do emulate this via software. With the iPhone version of the game, we've not 'replicated' the slow-down of the arcade version.

The reason that we did not replicate slow-down with *Espgaluda II* is that the controls (interface) were originally designed for another type of hardware, so instead of a 'complete port' we aimed for something that would draw out a fun control method to complement the iPhone interface.

As Cave's games reach a wider audience, how do you plan to offer gameplay that welcomes new shooter players as well as challenging your most capable fans?
We develop with the aim of creating games to give a wide variety of users the opportunity for many different types of achievement.

We create easier game modes to give beginners a sense of accomplishment and fun when they clear the game, but also brutal game modes aimed at dedicated shooting fans, in which bullet patterns descend on the player in raging billows and only a few mistakes are allowed. It's this variety of game modes that provides a broad palette for our players to enjoy.

dev

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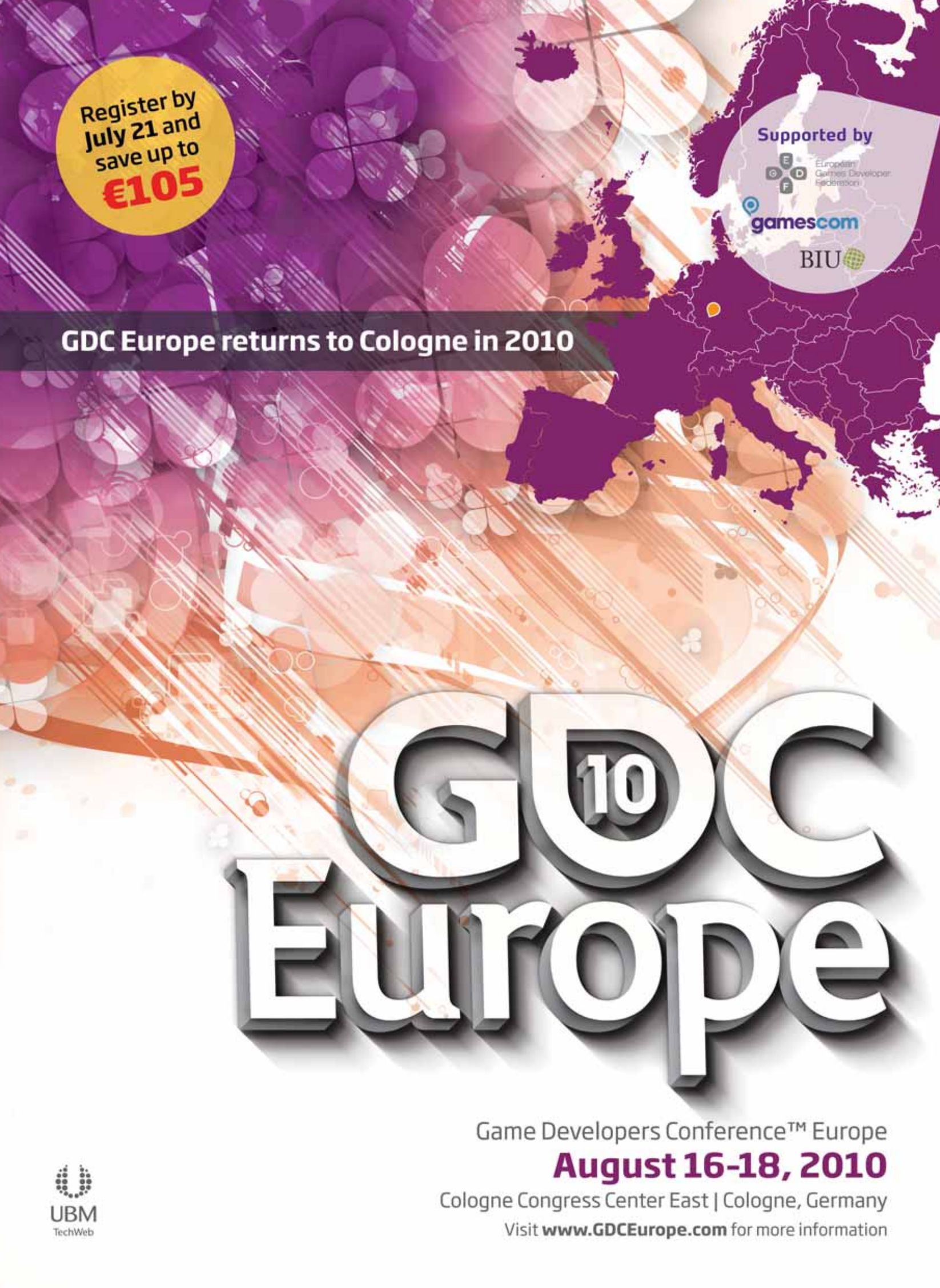

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Middleware dissected

Develop provides an in-depth look at the changes facing game technology, p38

Engines of change

A decade after the rise of middleware from niche feild to industry dominating force, **Will Freeman** takes a look at sector charged with rapidly adapting to and driving changes in the new game development landscape…

A few years before the acquisition of Criterion's Renderware in 2004 by EA, the middleware sector was still in a relatively fledgling state, dominated by a clique of high profile tool and engine firms.

That was before the iPhone, Facebook and the segmentation of the middleware market into a state where all manner of offerings – from complete engines and toolsets to weather systems tech – compete for studios' attention. In 2010, the middleware market looks very different from how it appeared six-years previously.

As the definition of just what middleware is enters a new state of flux, and the companies developing tools and tech start to toy with the boundaries that divide them from service companies, it's a perfect time to take a long hard look at the sector today, and ask where it will be in the near future.

"It's always difficult to get a handle on just where middleware begins and ends, and what it's in the middle of," proposes Paul Mayze, COO of Monumental Games, which, when not developing games, offers its own end-to-end MMO creation solution named Monumental Technology Suite.

Above: Unity's graphics pipeline for both DirectX and OpenGL can produce some impressive results

> ***"Using middleware, developers can focus more resources on innovative gameplay and less time on just getting basics into their codebase."***
>
> Mary Beth Haggerty, Autodesk

"When the likes of Criterion and Epic took the industry from niche to mainstream it all seemed so much clearer – but probably because they accompanied a pretty limited group of genres targeted at a small number of platforms whose audience was well-defined."

Now, with middleware firmly fixed in the games developer's conscience, its hard to refute the suggestion that non-proprietary tools are as integral to the industry as studios and the publishers that so many paint as the sector's villains.

TOOLED UP

That shift from niche to convention is down to one thing; developer attitude to middleware. Increasingly the idea that – like some virtual industrial revolution – middleware is coming to take developers' jobs is becoming a rather archaic notion.

"I think that the attitude of games developers towards middleware has changed over the past five years," suggests Autodesk's senior industry manger for games, Mary Beth Haggerty.

"As games have evolved in sophistication engineers have begun to realise that it is not efficient, or even interesting, to solve all problems themselves. Using production-tested third-party middleware can free teams to work on what is fun and interesting in their game, rather than concentrate their efforts on problems with available solutions.

"Using middleware, developers can focus more resources on innovative gameplay and less time on just getting basics into their codebase."

Middleware's success in winning the affection of games makers comes primarily from its ability to adapt with the market, and give developers what they want. Which begs the question; exactly how is middleware today evolving to meet the want of modern games studios?

It's an enquiry that generates a lot of answers, and the first comes from Blitz Games Studios. "The shifts we are seeing in the games market are changing the scale and speed of development, making it essential to deploy middleware that provides tools for rapid development and prototyping," explains the standalone toolset provider's studio technical director Richard Hackett. "The ability to make edits in real-time on the target console, visual tools so that designers and artists can work effectively and an integrated tools pipeline are all essential elements for fast and effective development."

To many, the issues testing the dedication of developers today – namely budgets, team sizes and production timelines – are effectively exaggerated versions of the very concepts that inspired the first generation of middleware. As those trends have become ever more amplified, so has the pace at which middleware providers need to adapt the offering they provide.

CASE STUDY: ENGINES AND TOOLSETS

THE CORE OF THE middleware ecosystem is also the heart of many games' very existence; engines and toolsets. The number of engines and complete SDKs catering for the ever-broadening range of platforms is today quite bewildering.

While the likes of Unreal Engine 3 still enhance the process of creating triple-A games, the revolution in browser and app titles, along with the return of the microstudio, means that a new breed of solutions by the likes of Unity and Ideaworks Labs are fast establishing themselves as key technologies.

"All of the changes over the past five years present new opportunities for responsive companies to deliver solutions that help developers create engaging, creative new experiences for consumers," opines Scott Johnson (facing page), CEO of Gamebryo LightSpeed firm Emergent (**www.emergent.net**).

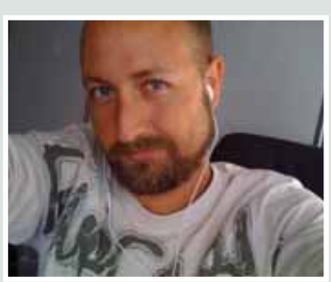
Johnson also suggests that despite the ever-diversifying nature of game development platforms, the core service engine companies provide remains unchanged. "The dynamic is the same – for triple-A publishers or a solo indie engineer-designer – by lowering the technical barriers to innovation and democratising the industry better games will be brought to market.

StoneTrip (**www.stonetrip.com**) CEO Philip Belhassen (right), whose company specialises in complete middleware solutions for app developers is also of the opinion that SDK houses must be quick to respond to industry fashions.

"Our focus on mobile and web platforms is a result of the trends in the industry," he says. "There's also a lot of interest in social games and we're refining those tools with several of our customers launching games on Facebook and other social platforms."

While keeping an ear to the rails that stretch to the future is a key concern for engine companies, other rather more thorny issues also dominate. One in particular is integration. While partnerships can be the making of single task solutions, for those offering a complete package things are a little more delicate, not least because of keeping things affordable.

"For BlitzTech (**www.blitzgamesstudios.com**) we have integrated with a few key



providers where developers wanted to use familiar tools that were part of their workflow," clarifies Blitz Games Studios studio technical director Richard Hackett. "However we do want to ensure that we remain a complete solution for the majority of titles without requiring additional licensing as this can be a hidden cost for developers."

"There is a lot of legacy workflow out there; people putting up with proprietary editors because that's the way things were done back in the id Software days," adds Jonathan Nagel, sales and marketing director of engine for Ready at Dawn (**www.readyatdawn.com**).

"It's a huge productivity killer and forces teams to deal with really sub-par editing tools compared to, ▶

Above: Unity in action in PaperMoon (left) and Fork Particle flexing its muscle (right)

"Middleware will become more important as development time has to shrink to be financial sustainable and specialised," confirms Thorsten-Tobias Heinze, the product manager of Periscope Studios' dynamic audio solution Psai. "Teams of middleware developers can focus solely on their middleware development as R&D teams become more difficult to sustain for developers. Even in Japan with its traditional in-house development philosophy, the developers start to turn towards middleware."

As the East gradually welcomes the middleware it was once infamously cautious to embrace, another trend is changing the rules closer to home. Social network gaming is here to stay, and with it comes its kissing cousins mobile and indie development.

MOBILISING MIDDLEWARE

Autodesk's Haggerty is quick to highlight the fact that the games industry is now expanding, and powerful handheld and mobile models are looming large on the market's landscape

"Just because these do not follow a traditional console cycle does not mean middleware companies do not need to keep up with constant hardware innovation in this area. Autodesk is actively partnering with mobile and handheld hardware manufacturers to better respond to developers evolving requirements."

The tech giant isn't alone in recognising that a new breed of developer, working not only at a different scale, but with an entirely new ecosystem, is hungry to harness the potential of middleware.

"Indie or small developer market is a major target now for middleware companies," says the CEO of particle effects specialist Fork Particle Noor Khawaja. "I believe we will see more middleware for mobile devices and online browser gaming. We have not yet tapped these markets but we are keeping a close eye on them."

Fortunately for the army of new content creators embracing social gaming, barriers to entry for the most ubiquitous platforms, such as mobile and web, are falling by the wayside.

That's according to Philip Belhassen, CEO app middleware specialist StoneTrip: "Middleware will likely continue to evolve and add more features and enable people without deep technology backgrounds do more with the tools.

"It's exciting to think of the creative ideas that people will come up with and then think that we will hopefully be a part of them achieving their development goals."

With that in mind, it's natural to think, says Belhassen, that some consolidation will occur as tools merge and morph to meet studios' requirements. To that end, StoneTrip has been enthusiastically adding app-friendly platforms to its ShiVa 3D engine, and claims to be the first to enable 3D game development on iPad, Android and recently Palm webOS.

StoneTrip is even readying its tools for Facebook development; something that would have seemed rather implausible at middleware's dawn

Even more specific discipline-focused middleware offerings, such as the Firelight Technologies' FMOD audio solutions, are recognising the value in the boom in social and mobile gaming. As well as supporting the likes of PS3, 360 and Wii, the duo of FMOD solutions also embrace iPhone, Unity and Android integration.

"For middleware providers, it is essential that understandings of new platforms are secured early and tools provided that support the unique features of the platform," explains the firm's sales and business manager Martin Wilkes. "As an example here, FMOD worked to provide support for both the iPhone and iPad. This has been a great addition for FMOD with some 200-plus titles and we are working closely with leading publishers such as EA."

Another provider of tech tailoured very specifically making itself available to developers on platforms traditionally viewed

CASE STUDY: ENGINES AND TOOLSETS

▶ say, a world class 3D editor like Maya. We have partnered with Autodesk on this and everyone is very excited about the direction we're going."

Vision Engine creator Trinigy (**www.trinigy.net**) describes collaboration with other tool companies and developers' internal technologies as critical.

"Long ago we learned our lesson that game developers often have preferred technologies for specific projects, and that those technologies might change from project to project," reveals Trinigy GM Felix Roeken. "Therefore our technology had to be versatile enough to support whatever tools our customers wanted to use."

For other companies, such as Unity (**www.unity3d.com**), in a curious spin on the practice of integration, tools are being used by studios for purposes that push the boundaries of their intended use.

"Now we are so well known people are considering using it in many ways," enthuses Unity CEO and co-founder David Helgason.

"We fit all kinds of spaces – some just use us for rapid prototyping before switching back to their other tools. Which is fine by me. Of course a few then end up developing more and more with actual Unity once that prototype is built."

Elsewhere innovation is about subtlty of approach. Epic's hugely popular and prolific Unreal Engine 3 (**www.unrealtechnology.com**) is a case in point.

"Sometimes we don't have super sexy improvements to show – the rest of the time it is incremental changes. But we want to be able to do things that some other team might spend 40 guys and years and years building," affirms Epic's vice president Mark Rein.

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as hosts of small scale productions is user interface specialist Scaleform, which frequently supplies front end solutions for triple-A games.

"Mobile and social gaming forces middleware vendors to question their product offering and make hard decisions about whether or not they should adjust to these new markets," reveals Scaleform's president and CEO Brendan Iribe. "Staying focused is important, but missing a major market, especially if competition gets there first, can be very costly."

Middleware needs to help developers take advantage of all the available hardware and software functionality, says Iribe, including multi-touch, accelerometers, cameras, and increasingly, stereoscopic 3D. There's also the capacity for mobile middleware providers to tackle the likes of maximising the memory, performance, and battery life.

MOVING ON

Of course, social and mobile platforms aren't the only areas of the industry catching the attention of increasing numbers of gamers. There's also been a resurgence of interest in new controller technologies, which, as Blitz Game Studios' Hackett highlights, provides new challenges and opportunities.

"We again benefit from our direct connection to in-house game development that drives this continuous change. To back up our strategy of offering an integrated and complete development solution we continue to make substantial investments in new technologies as we have with 3D TV and including provision of a motion control toolkit which will be part of BlitzTech as standard. The new kinds of gameplay and the increased engagement with 'non-gamers' made possible by these devices is something that really excites us at the moment."

Of course, Hackett is referring to both Natal and Move, which each promise to fill the gaps exposed by the Wii's eventual shortcomings.

"Natal opens the door for new category of middleware that will utilise new peripheral hardware capabilities," enthuses Fork Particle's Khawaja, as conversation turns to the future. "I think we will see middleware that does stuff with adjustable intelligence added. A 'Natal-like' system which takes interactivity to a new level may trigger the trend for artificial intelligence and decision making technology applied to gesture recognition, facial expressions and emotions, and conversational speech. I think these are only a few applications and there is room for many more."

Motion control certainly seems set to test tool and tech companies, but arguably it introduces no greater challenges than those long presented by the PC infrastructure. Middleware providers have long wrangled with catering for graphics cards changes, and parallels like Direct X updates.

Perhaps that's the reason Torsten Reil, the CEO and co-founder of human body movement experts NaturalMotion, is so optimistic about the fact that Natal is being pitched as the alternative to a new hardware generation: "I think everyone will benefit from an extended hardware cycle. For example, we have a lot of product and technology ideas that will run perfectly fine on current hardware. In addition, Natal and Move itself are opening up very compelling opportunities for technology providers."

There is reason for caution, though, as Natal and Move threaten to shake up middleware before its overall ecosystem settles. "The danger is that small middleware companies could reach a tipping point, where they are forced to spend more time ensuring compatibility with an explosion of platforms than making their core product better," warns Frank Kane, founder of sky rendering experts Sungdog.

"Bottom line, middleware development is going to get more expensive. Companies that can effectively scale and shield their customers from this complexity will be the successful ones."

> ***"Social gaming forces middleware vendors to question their product offering and make hard decisions abut whether or not they should adjust."***
>
> Brendan Iribe, Scaleform

If that weren't enough to worry about, Intel's long promised multi-core future is on the horizon, as the megahertz race apparently concludes. According to Scaleform's Iribe the demand for heavily optimised multi-threaded software is on the

Above: Sundog Software's founder Frank Kane, and (left) Scaleform's tech providing Uno Rush's user interface

CASE STUDY: AI

TO MANY, AI PROVES one of middleware's most exciting fields, where new approaches and techniques are commonplace. One of the most experienced tech firms in the sub-sector is Xaitment (**www.xaitment.com**), which works on the principle that AI needs to benefit from the same kind of investment of energy and cash that game visuals have enjoyed up until this point.

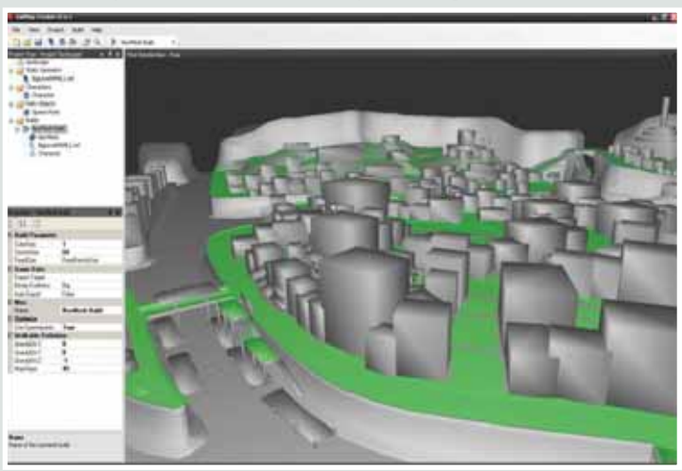
"In the past AI engines only included pathfinding and movement as one big monolithic engine," explains Dr. Andreas Gerber, xaitment's group CEO and managing director. "We spend a lot of time in discussion with our clients - is that really what they need? And it turns out – no. They want to have smaller products, so that they can decide which engine to use and not to pay for a huge set of functionalities they only use 30 per cent of, which means they wasted money."

As a result, xaitment has created its modular AI offering, which offers five distinct solutions for better implementing AI, covering navigation meshes, movement behaviours, NPC AI, world description knowledge management, and AI rule systems.

"AI developers love the job," suggests Gerber. "They are looking for a job where they can build the AI – the way characters move and behave – by their own, and they are proud of it. If we sell huge engines, the AI programmer degenerates to just an integration programmer and this is no fun and it is the job he is not willing do to. For that we see a big trend in lean engines and powerful easy-to-use tools. And that is exactly what we do.

Another company providing AI tech is of course middleware giant Havok (**www.havok.com**), which has seen an interesting trend in terms of the use of Havok AI, which is now increasingly popular in the MMO space.

Korea's NCsoft and ArenaNet, which is based in Seattle, both use Havok AI, says the company's new MD David Coghlan, "because it gives them a foundation for basic pathfinding in their games so they can get on with the real business of pathfinding AI".



Above: Studio technical director of Blitz Game Studios Richard Hackett. Right: Havok Destruction at work.

rise, and gaining momentum. Still, it's not all bad news, if the capacity of investment of effort is in place.

"There's a growing opportunity for tools and middleware providers to get ahead of the curve and start addressing the needs now, or at least start working on them," suggests the CEO.

> ***"Stereoscopic 3D is a feature of the future for all graphics – whether offline, real-time, in games, movies or in simulation and visulisation"***
>
> Carl Jones, Crytek

"Efficiently multi-threading a core middleware solution that wasn't originally designed for it usually requires a significant amount of architecture and code changes, often a complete rewrite. To complicate things further, the solution should be designed to scale from a single-threaded single-core scenario to a heavily multi-threaded multi-core environment.

BACK TO THE FUTURE

With the industry currently defined by its restlessness, looking a little further forward at the prospects for middleware is slightly daunting, but the future is certainly

enthralling, and if many are to believed, it's also set to boast impressive depth.

"Stereoscopic 3D is a feature of the future for all graphics – whether offline, real-time, in games, movies or in simulation and visualisation," insists Crytek's director of global business development for CryEngine Carl Jones. "Whilst it is not required for the effective development of all such projects, it does add, well, literally an extra dimension to any virtual environment, so having a solution that is efficient and allows instant creation and control will be vital for certain projects."

Along with the need to take a gamble on Intel's multi-core plan, the potential rise of 3D means middleware providers must be prepared to spend some hard earned cash in place of their developer industry-mates. In the wake of the recent economic crisis, which saw the core market risk fewer new franchises and instead commit to bigger budgets on formulaic entertainment, the financial challenge is perhaps the biggest middleware providers will face in the coming years.

"The impact on the video game development landscape is irrevocable and is resetting how games will be made and go to market," warns Emergent's CEO of game technologies Scott Johnson. "The video game industry is only now beginning to recover from a rash of studio closures and developer layoffs, and publishers are striving to find new models for creating high-quality gaming experiences with less risk, smaller staffing counts, and lower overheads."

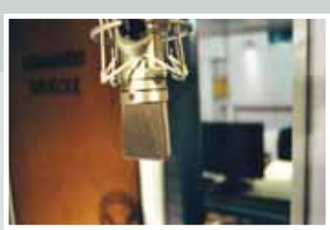
From Johnson's perspective, a tough start now does mean an increase in the standards of future tools and tech: "Shorter game development schedules and smaller budgets demand that middleware solutions drop into game projects easily and live alongside other middleware productively in a content ecosystem that doesn't care whether functionality comes from middleware or internal technology. Content creators won't have to worry about which vendor is responsible for Tool X or Feature Y, because it will work, and it will work seamlessly with the rest of the game's toolset."

Equally optimistic about the pressure on the middleware sector is Stephanie O'Malley Demming of XLOC, which offers localisation integration tools. The company president argues a convincing case that sees developers woes meaning more work for tool and tech providers: "As game development becomes more intricate, developers will continually look for solutions that take care of the standard areas of production, so that they can focus on the more complicated, creative, core aspects. Allocating internal resources to non-core functions of game development is expensive, and as time goes on, developers and publishers will increasingly feel that it's worth investing in middleware solutions that already have technology created and evolving, and that are built to be incorporated into engines or processes."

INTEGRATED CIRCUITS

Speaking to the experts of the sector, it appears middleware suffered a similar fate to motion capture in its early history. Initially

CASE STUDY: AUDIO

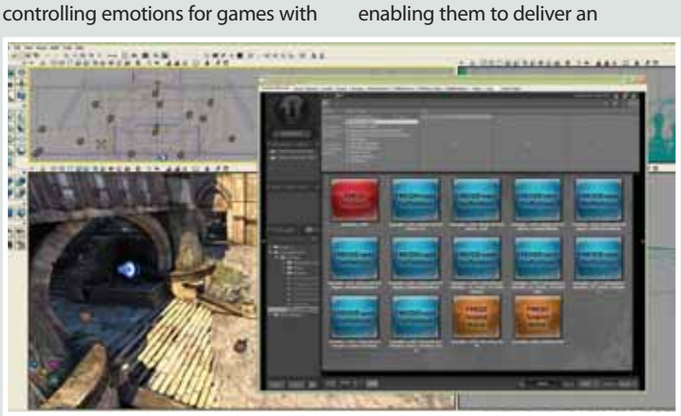


THE FIELD OF AUDIO middleware is one of the more established, but that doesn't mean it has become staid. In fact, the area is charged with constant innovation, as methods like dynamic audio become the norm.

Hamburg's Periscope Studio (**www.periscopestudio.de**), aptly set up in a converted submarine engine factory, is one of the most impressive of the audio specialists. Having created a thesis from its work converting its property to house a pair of recording facilities, the team is now hard at work introducing its psai technology to the world.

"Psai is a solution for creating and controlling emotions for games with music," explains Finn Seliger, Periscope Studio's, art director and head of research and development. "A simple tool helps the composer to create music for the purpose of interactive playback and a middleware provides the developer with an easy-to-use interface in order to connect the music to the game play situation."

"Our middleware's aim is to supply the composer and developer with a tool that supports the synergetic move from movie and games to converge into one form thus enabling them to deliver an interactive gaming experience with a real interactive soundtrack to deliver the tensions and emotions you get immersed in inside a great movie," adds psai product manager Thorsten-Tobias Heinze.



Another innovative entrée on the audio middleware scene is Firelight Technologies (**www.fmod.org**), which makes a pair of distinct solutions; namely FMOD EX and FMOD designer 2010.

"We support all formats from PS3 and Xbox 360 to Wii, from PC, Mac and Linux to iPhone and iPad," confirms the company's sales and business manager Martin Wilkes,. "And yes, we are working with Unity for the Android platform."

While FMOD Ex promises to provide for all audio requirements for video game development, FMOD Ex is conceived to extend the creative boundaries of audio implementation for games and other media. It is also designed to put minimal demand on resources and be fully scalable.

Autodesk Games Insight

The Latest Scoop from Autodesk Media & Entertainment

> By trusting in a stable high-quality package like HumanIK, we never even have to think about the quality of the results. We simply know that the quality and performance will be there.
>
> —James Therien
> Lead Programmer
> Ubisoft Montreal

***Assassin's Creed II*. Image courtesy of Ubisoft.**

Renaissance assassin.

In 2007, Ubisoft's third person action-adventure game *Assassin's Creed* vanquished its competition in a manner worthy of its titular hero. Set in both the not-too-distant future of 2012 and the distant past of 1191, the game was an instant success with players and reviewers alike, leaving gamers wanting more.

Ubisoft has used Autodesk® software products in their game pipeline for many years. The powerful combination of Autodesk® 3ds Max® and Autodesk® MotionBuilder® software, together with Autodesk® HumanIK® animation middleware, helped the company create yet another game for the ages.

The Challenge

The primary challenge to any sequel is to improve on the original while staying true to its spirit. Thanks to a clever backstory taking place in 2012, both *Assassin's Creed* games are able to remain firmly in the future while telling an ancient story.

In the original version, 2012 bartender (and player-controlled protagonist) Desmond Miles is kidnapped by a pharmaceutical company to test a new machine capable of reading his "genetic memories" and then placing Desmond himself to simulate the experiences of his ancestors. As a result, Desmond finds himself in the role of Altaïr ibn La-Ahad, an assassin in the year 1191.

For its part, *Assassin's Creed II* sees Desmond (still in 2012) escaping the pharmaceutical company, only to enter a more powerful version of the original machine and reliving the genetic memories of Ezio Auditore da Firenze, another assassin, but this time wreaking his vengeance during the Renaissance.

"From the start, we were trying to redefine and improve on the first *Assassin's Creed*," says James Therien, lead programmer at Ubisoft Montreal. "We wanted better characters, better acting, and a better script, along with the muscular game play and acrobatic fights that players of the first version would be expecting."

The Ubisoft team wanted *everything* to be better in the sequel. That is always a lofty goal, but Ubisoft was definitely up to it.

The Solution

"One of the most important aspects in our vision of *Assassin's Creed II* was a more realistic hero," says Therien. "There is a great deal of acrobatic climbing, together with fighting, flying, and interaction with crowds. For the climbing, HumanIK middleware was a huge help. It enabled us to create new and better moves through a faster iterative process. With HumanIK, we never had to worry about the quality of the inverse kinematics solving. When a problem with jittering occurred, we could have wasted a lot of time attempting to optimize our compression methods for our basic animation, but by trusting in a stable high-quality package like HumanIK, we never even have to think about the quality of the results. We simply know that the quality and performance will be there."

To develop an even richer, more believable experience, the Ubisoft team also significantly enhanced the role of nonplayer characters (NPCs) in *Assassin's Creed II*.

"The NPCs were limited to chase scenarios in the first version," says Therien. "In the new version, they are right there in your face, which requires more precise animation. HumanIK was invaluable to removing excess jiggle from the NPC arms, making sure the feet are planted correctly, and that kind of thing. The result was a huge improvement in our cutscenes. We were able to compress much more animation and still deliver great quality."

The Game

Since the release of *Assassin's Creed II*, it seems that the Ubisoft Montreal programming team has accomplished its formidable task. The sequel has been uniformly praised by reviewers while selling 1.6 million copies the first week it was released.

For Therien and Ubisoft Montreal, using Autodesk software has consistently helped them to raise their own expectations and the gaming experiences they create.

"3ds Max is at the core of all our content creation. All the characters, all the meshes were created with the software. We also filter all of our motion capture data used for cut and fighting scenes through MotionBuilder. That is a lot of data, and MotionBuilder handled it all."

For more information about Autodesk games software and middleware, visit **www.autodesk.com/games**.

***Assassin's Creed II*. Image courtesy of Ubisoft.**

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overenthusiastic middleware firms promised the world, proposing that their products could solve developers' every problem.

"It's not what we're seeing right now and a lot of people are very bitter with their experiences," suggests Ready at Dawn's sales and marketing director of engine Jonathan Nagel. Like many of its contemporaries Ready at Dawn is a developer that has seized the chance to move into the middleware sector.

"There are so many disjointed parts too," states Nagel. "Something we're trying to solve with our integrated approach, where teams have to license an engine and then choose between ten other pieces of middleware to complete it if they can get it to all work together and play nice."

The disparate nature of vast swathes of today's middleware market is slowly disappearing, and every day in the development community seems to bring news of a new collaboration or integration. Things are still complicated though, and as a result a new focus on efficiency and simplicity has been born.

"We do have new tools to combat this rise in complexity," promises Emergent's Johnson. "Scripting languages and higher-level compiled languages are improving the efficiency of both game developers and middleware providers. Open interoperability standards make it easier than ever to share content between middleware products and studios' internal technology."

And the glue between these advances? Improved prototyping toolsets that give games makers the ability to rapidly iterate on technology free from delay. Quite simply, middleware is now better at fusing itself with developers' own tech.

That's all very encouraging, but the issue of an increasingly diverse dev sector remains, meaning the pressure is on for middleware houses to keep focus.

"In today's shifting market, it is very easy to get distracted and to shift your development efforts to meet the flavour of the day," warns a pragmatic Felix Roeken, who serves as Trinigy's general manger, and works with the firm's popular Vision Engine. "That approach tends to have the opposite effect on customers as tech providers shift resources and forget about those customers who made them successful in the first place. The trick is to respond to changes without losing sight of your core competencies."

> ***"Scripting languages and higher-level compiled languages are improving the efficiency of both game developers and middleware providers."***
>
> Scott Johnson, Emergent

Concentrated effort is clearly a priority then, if middleware firms are to thrive, but that must be balanced with the adaptability needed to cater for the expanding range of new platforms.

"Recently there has been a resurgence of debate on the impact of piracy on the health

Above: Crytek's director of global business development Carl Jones, and (left) CCP's Dust 514 making use of Unreal Engine 3

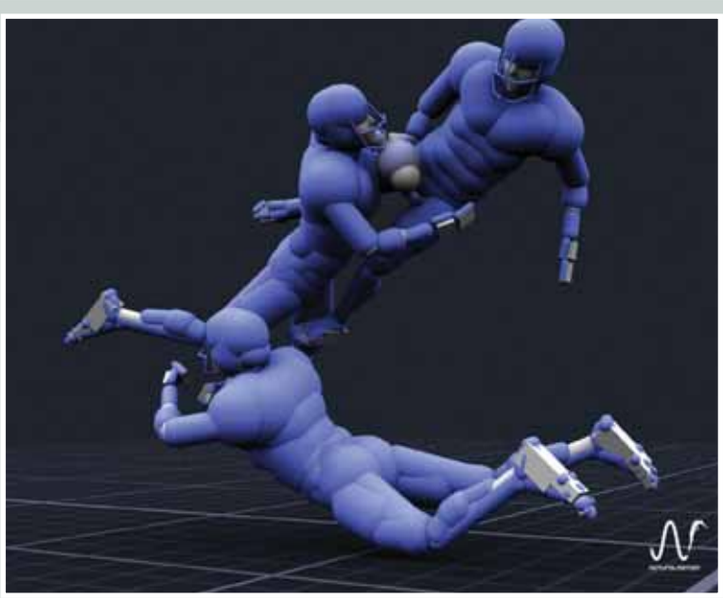
CASE STUDY: In-game characters and animation

BADLY IMPLEMENTED NPCS and player avatars break the allusion of a game world like no other creative attribute, save perhaps substandard voice acting and poor facial animation. For that reason, middleware designed to ensure more convincing character movement is rife with innovation.

Multiple industry-spanning tech firm Autodesk (**www.autodesk.com**) is one of the area's most prolific companies, and offers HumanIK, a full body inverse kinematics solution for more realistic character interaction with objects and environments in the game, and Kynapse, an AI solution for dynamic pathfinding, spatial reasoning, and team coordination.

"HumanIK is a robust full body IK solver that is a big part of many sports like FIFA and action games like *Assassin's Creed II*," says Autdesk's senior industry manger for games, Mary Beth Haggerty. "One key advantage is a realtime IK solution specifically designed to help integrate sophisticated animation created using Maya and MotionBuilder directly into the game.

"Kynapse is a 3D dynamic pathfinding solution which has been rigorously production tested in over 100 games in the past ten years. Its main advantage is its ability to efficiently and effectively provide NPCs with the AI necessary for environmental perception, team coordination and pathfinding in dynamic 3D environments."



Despite Autodesk's size, it isn't the only organisation pushing the boundaries of in-game character middleware. NaturalMotion (**www.naturalmotion.com**), which recently began the international roll out of its internally developed game *Backbreaker*, provides an impressive pair of technologies; dynamic motion synthesis engine Euphoria, and graphically authourable animation engine Morpheme.

"With Morpheme, we're giving people a level of control over their in-game animation that is very hard to achieve with in-house tools," reveals Torsten Reil, the CEO and co-founder.

"We're spending a lot of resource on further developing the tools and workflow to get people to work faster and faster. In addition, Morpheme ships with a lot of useful features, including advanced blending algorithms, event detection, IK, physics integrations etcetera."

CASE STUDY: PHYSICS

PHYSICS MIDDLEWARE is perhaps the most famous tech from a consumer standpoint. The likes of Havok Physics (**www.havok.com**) revolutionised not just the look, but the gameplay of a huge number of 3D games on console and PC.

More recently, physics tech – be it middleware or not – has been integral to the success of a number of casual and iPhone games, and that market is attracting companies typically associated with high end offerings that push current gen platforms to their limits.

Havok physics is still the most popular product from the Irish middleware giant, despite the success of tech like Cloth, Destruction and Animation, and has starred in a run of sequels this year, including *BioShock 2, Just Cause 2, Assassin's Creed II* and *Mass Effect 2*.

According to Havok's recently instated MD David Coghlan, sandbox game *Just Cause 2* is typical of titles that rely on physics middleware for a great deal more than visual showcasing.

The game is, Coghlan says: "very physics driven – its gameplay stands out due to the way it uses physics so deeply".

"Physics development for us at the moment is concentrating not on adding new features but performance – making sure we are optimised for all formats. We are also adding new SKUs for platforms you might not expect, like iPhone for instance. They are becoming more important."

Havok Physics is most famous for its capacity for handling real-time collision detection and physical simulation solutions, but it also offers impressive scalability, and features a wealth of content creation tools for 3Ds Max, Maya, and XSI.

As well as Havko's famed Physics tech, the company's AI, Animation, Behaviour, Cloth and Destruction products continue to dominate, and promise to mitigate the overall cost and risks of triple-A game development today.

and future of PC gaming, and on the opposite end of the spectrum some pundits have even questioned the likelihood of a future console generation," says Emergent's Johnson.

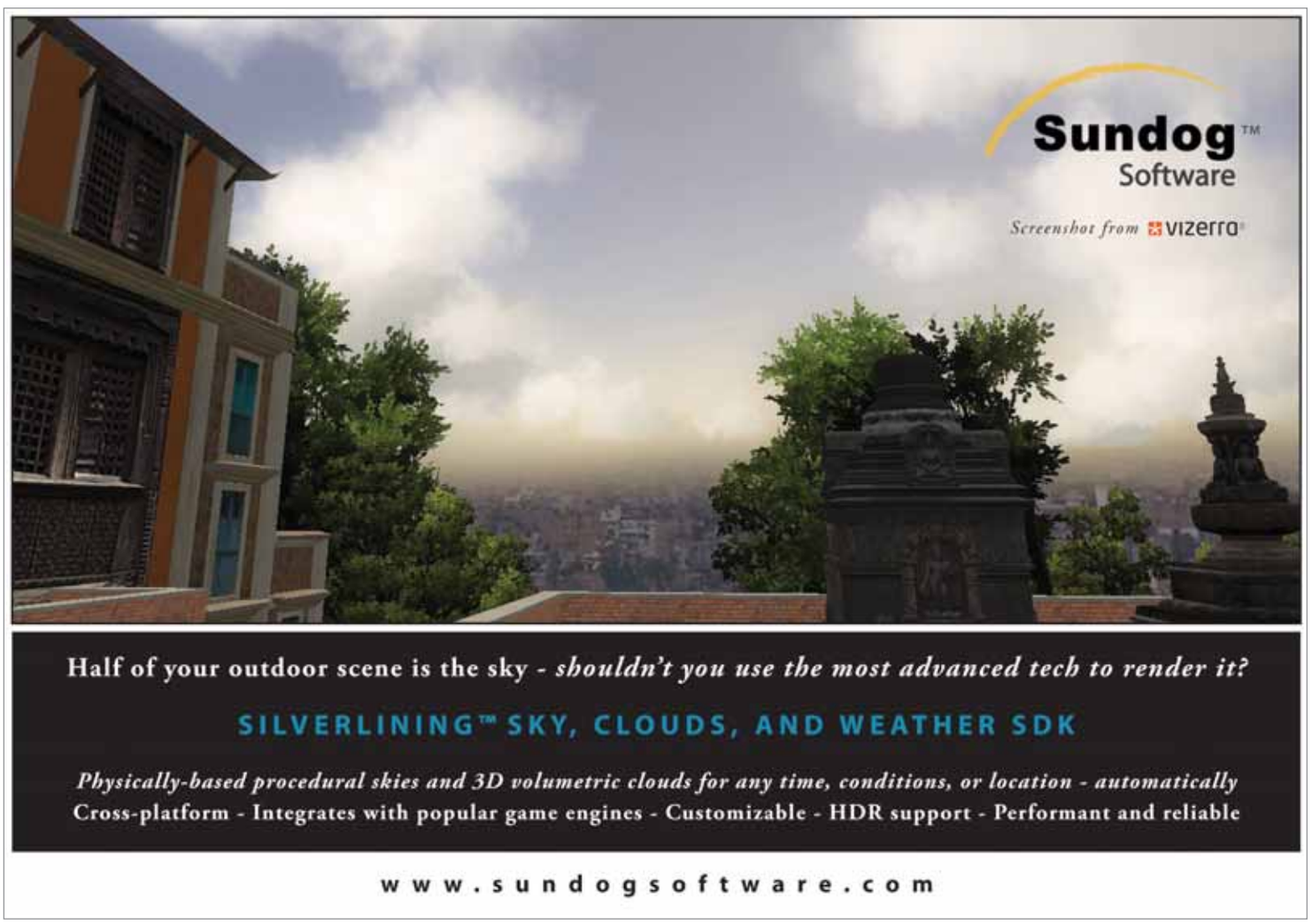
"The PC and console markets are going to continue to thrive, thanks to the vision and passion of game creators, platform holders, middleware developers and publishers working together to create entertainment that consumers want."

DIVIDE AND CONQUER

It seems then, that segmentation is a necessity, and something that will define the future of middleware. At least, that's what Xaitment's group CEO, Dr. Andreas Gerber thinks. "That is the first trend, to have independent, smaller and much more flexible and specialised engines and tools. But independent in a way, that all these smaller engines fit very well together, if someone want to use them all," confirms the man heading up the team behind Xaitment's suite of AI tech.

Few refute that segmentation is the solution to securing a stable future for middleware, but juggling the finer points of diversity, focus and integration isn't without significant difficulties.

"Certainly, segmentation can be a challenge since it requires us to constantly re-think and adjust our products, business model and strategy as the case may be," admits Trinigy's Roeken. "However, at the same time segmentation is a gift since it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Left: As well as offering its MMO-focused SDK, Monumental also develops games, including MotoGP 09/10

creates new business markets, new revenue streams and – ultimately - enables growth. Hence, segmentation took a key role in the maturing process of our industry in the past years and I trust it will continue doing so in the future – let's embrace it."

It's hard not to warm to Roeken's optimism, but not everybody takes such an upbeat perspective on the potential pitfalls middleware is currently straddling.

"Middleware has to start delivering on its promises," advises Ready at Dawn's Nagel. "No one is going to continue licensing engines that require you to rip half of it out before you can even start or connect it to some other piece of middleware it wasn't designed to work with. People have learned from their mistakes and I think the real era of middleware starts now with companies that will be smart enough to be honest with their customers and make promises that are realistic and achievable. We're here to help the teams we work with achieve their vision and make it easier on them, not just to take their money and run."

The future success of middleware also lies with harnessing the potential of areas outside of traditional gaming. As the tech behind films and games continues to offer new opportunities, so does the expanding world of serious games.

"We've always had strong business in that sector and it continues to grow for us," explains Sundog's Kane. "Middleware providers need to be conscious of the specific needs for applications that aren't purely for entertainment; physical realism and interoperability with government standards are important in that world. I also see the number of tools, engines, platforms, and technologies that middleware providers need to support continuing to grow over time."

Another emerging trend in the field of middleware is that of working with the developer, initially to assist with both support and advice, and ultimately to adapt core tech in response to a studio's needs and take those modifications to a wider audience.

"This can lead to some fantastic developments that then can be integrated into tools for other developers," reveals FMOD's Wilkes. "A great company for this was the team at Neversoft with the *Guitar Hero* series. A fantastic game based entirely on audio, and it was at Neversoft's request that FMOD developed many features for that series; features that are now available to all FMOD users."

> ***"People have learned from their mistakes and I think the real era of middleware starts now with companies that will be smart enough to be honest."***
>
> Jonathan Nagel, Ready at Dawn

Whether you view middleware as the saviour of game development or greet its presence with suspicion, there's no doubt that it is not only here to stay, but it is increasingly intertwining itself with every element of modern game creation. Dividing and streamlining with ferocious efficiency, it is an incredibly adaptive, dynamic sector, and as such, is perfectly placed to encircle the new fields of social games, extended console markets, and new platform paradigms.

CASE STUDY: 3D

3D DISPLAY TECHNOLOGY HAS reared its head several times in recent decades, but until now, has always felt like something of a fad. While the industry still greets the latest drive to establish stereoscopic technology with a degree of suspicion, the combined backing of the film, television and games industries does suggest that this time around, the technology could be here to stay.

Like it or not, developers are going to have to consider making games in 3D, and driven by a need to keep pace with emerging trends, the middleware industry is already set to cater for that possibility.

Engine giant Crytek (**www.crytek.com**) already offers stereoscopic support in its tech, but as the company's director of global business development Carl Jones reveals, it's not been an easy ride.

"While it is straightforward to get stereoscopic 3D running on a strong PC, it is a serious challenge on consoles due to performance constraints, especially as CryEngine 3 is a high-end engine, which makes full use of the available hardware resources. Nevertheless our R&D team found an innovative way to make stereo work efficiently on both the PS3 and the Xbox 360, without sacrificing any visual quality."

As a result, Crytek's stereo implementation supports an impressive range of different output devices on all platforms. Thanks to a company mantra of 'what you see is what you play', stereo support is fully integrated within CryEngine 3 Sandbox, subsequently allowing previewing and tweaking stereo content during production, without any delays.

Blitz Game Studios (**www.blitzgamesstudios.com**) is also committed to substantial investments in the area of 3D TV.

Speaking to the company's that lead the charge in the engine sector, it's clear that stereoscopic 3D is playing on their minds.

Vision Engine creator Trinigy (**www.trinigy.net**) has highlighted the trend as something key to the future of middleware, and others are sure to follow. The challenge, however, lies in bringing 3D to the broad range of platforms currently the target of middleware.

"For high-end PC, as previously mentioned, stereoscopic 3D is possible through brute force," explains a pragmatic Jones.

"On other platforms; and to achieve S3D in real-time, most people are accepting compromises on performance or quality. That is not the Crytek way. As such, we had some of our clever chaps here in our R&D team work at some amazing solutions that achieve the quality we want to see from 3D, but without materially impacting the performance."

CASE STUDY: SPECIALISED MIDDLEWARE

PARTICLE EFFECTS

Based in Pleasanton, California, Fork Particle (**www.forkparticle.com**) specialises in what it describes as 'spectacular' realtime particle effects. The firm's tech has been conceived to simulate – amoung other things – smoke, fire, rain and explosions. The Fork Particle SDK features both an authouring tool for creating effects and a runtime engine to simulate them in-game.

"Fork Particle Studio is an advanced and user-friendly particle effects editor," says the company's CEO Noor Khawaja. "Its 3D viewport provides real time feedback for efficient editing which lets artist utilise their creative energies to author their best work. Fork Live Tuner provides live update so artists can make final adjustments to the effects in-game."

MMO TOOLSETS

A developer itself, Monumental Games has chosen to focus its middleware offering on the increasingly lucrative massive multiplayer market. As the genre itself moves over to browser platforms, the company has spent three years working to accommodate that trend with its Monumental Technology Suite (**www.monumentalgames.com**).

"We realise [MMOs are] moving to consoles, so we've been developing that too," reveals Monumental COO Paul Mayze, who describes Steve Jobs recent rejection of Flash as the biggest controversy in middleware since EA acquired Renderware.

"We're not a substitute for Unreal any more than we're a replacement for Flash," admits Mayze. "But if a developer wants to make an MMO they'll very likely check us out."

USER INTERFACES

Not content with just the video game industry, Scaleform (**www.scaleform.com**) has also become the leading provider of UI software for the consumer electronics business. Based on the Adobe Flash toolset, Scaleform's GFx tech allows developers to build what the firm calls 'user interface environments' with minimum time.

"The Scaleform GFx engine delivers proven stability, optimised performance, a low memory footprint, deep integration with all leading 3D engines, a rich feature set with numerous extensions, and high conformance to the Flash specification, so developers can rapidly and efficiently author content," confirms Scaleform's president and CEO Brendan Iribe.

WEATHER SIMLULATION

Sundog's sky rendering and weather simulation SDK SilverLining (**www.sundog-soft.com**) is a case in point for the potential of highly specialised middleware; while the field it covers is remarkably streamlined, the potential it offers developers in terms of time saving and quality is vast.

Enabling studios to tackle real-time, physically based rendering of the sky, 3D volumetric clouds, and weather effects, SilverLining also features an outdoor lighting engine, letting user replicate accurate models of the sky at any time of the day.

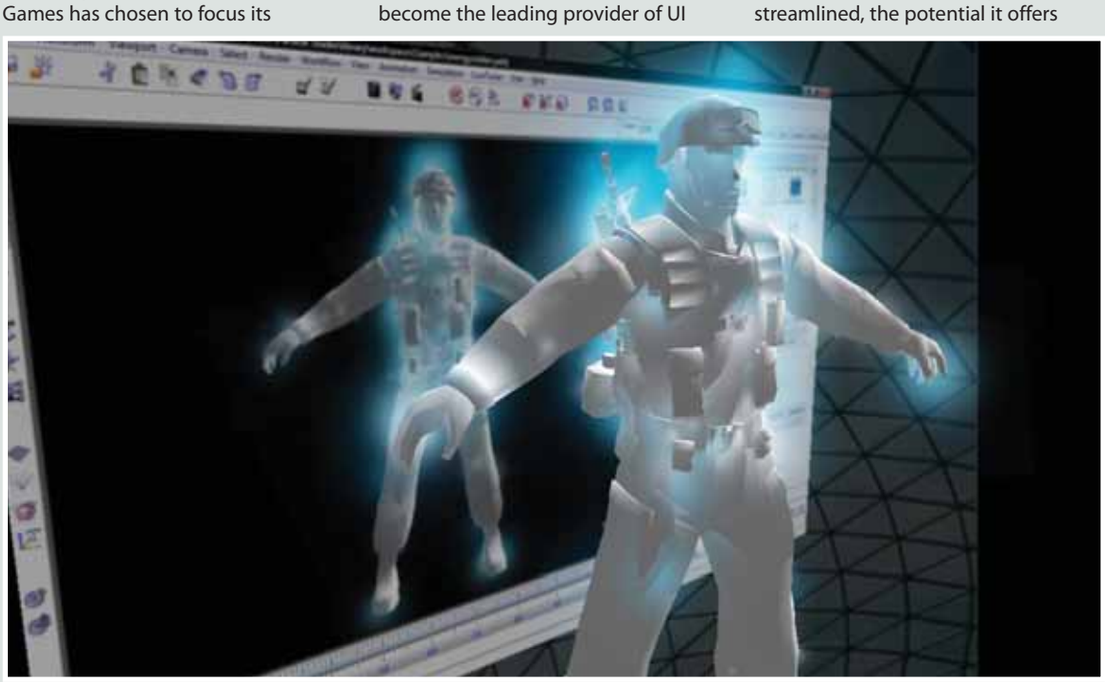
"Most of the big simulation companies for the military are using SilverLining, which means it meets the strict criteria used for real flight and combat training applications," enthuses SunDog founder Frank Kane. "As a result, it's very stable and full-featured. Another strength of SilverLining is its ease of integration. Although you can tie SilverLining directly into your own engine's renderer, it comes out of the box with OpenGL and DirectX renderers of its own built-in."

LOCALISATION INTEGRATION

While localisation is typically a service offering, XLOC (**www.xloc.com**) has created a middleware solution that integrates localisation into the development cycle, providing a centralised and standardised process that incorporates the localisation process with main SKU development.

"The creators of XLOC have extensive experience in game production and development," states XLOC co-founder and president Stephanie O'Malley Demming. "The team understands the intricacies of creating successful titles and has developed a system that combines all facets of the localisation process together into one interface. Above all, the architecture of XLOC is an open design that allows for specific customizations necessary in the creative game development process."

The XLOC suite can be leveraged as a stand-alone product or be combined with XLOC's consulting and support services.



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The Develop Conference opens again on Tuesday 13 July with Evolve, a day-long conference focusing on the cutting edge of game development. Evolve will explore emerging platforms, new business models and the integration of Internet services and user-generated content.

Who's speaking?

Traditional Games Breaking into Social Networks: A View from the Frontline
Louis Castle, CEO, Instant Action Inc.

Opening Evolve on the Tuesday, Louis' talk is going to cover what he's been up to recently - "attempting to free the games industry from the shackles of bricks and mortar and democratizing music games in the process!"

KEYNOTE

Gamification: How Games are Everywhere
David Helgason, CEO, Unity Technologies

Closing Evolve, David will draw on Unity's rapid rise to prominence in mobile and browser based gaming to analyse how games are leading the charge on mobile, web, TV and invading social networking platforms.

KEYNOTE

- **An Android Game Post-Mortem**
  Chris Pruett, Google Japan
- **A Casual Game in Every Pocket**
  Dave Bishop, PopCap
- **The iPhone Developers' Conference Call**
  Alan Yu, ngmoco; Chris James, Pocket Gamer; mills™ , ustwo; Matthew Higgins, Wonderland.
- **Unity, Flash and the iPhone: Happy Bedfellows?**
  Jeff Coghlan, Matmi
- **Hats, Loops and Levers: Inside the Rolando Studio**
  Simon Oliver, Hand Circus
- **Why Mobile Games Will Eventually Outperform Console Gaming: An Overview of Actual Smartphone Gaming And What's Next**
  Michael Schade, Fishlabs
- **An Explorer's Guide to Publishing on Facebook and Other Digital Platforms**
  Patrick O'Luanaigh, nDreams
- **Making Free Apps for Fun and Profit: Adventures in iPhone Game Development for a Triple-A Start-up**
  Matthew Higgins, Wonderland
- **Brand New: Recreating Call of Duty Zombies on iPhone**
  Russell Clarke, ideaworks 3d
- **Taking Icy Tower to Facebook**
  Johan Peitz, Muskedunder Interactive
- **Shock The System: Making Meaning AND Money with Indie and Social Impact Games**
  Gobion Rowlands, Red Redemption
- **Games As A Service: Do You Really Know What It Means?**
  Thomas Bidaux, ICO Partners
- **How 100 Users Turned into 100 Million - a Browser Game Success Story**
  Nils-Holger Henning, Bigpoint GmbH
- **5 Things Big Publishers Don't Understand About Small Games**
  Sean Murphy, Hello Games
- **Yesterday's Games Designers: Tomorrow's Social Tech Innovators**
  Gabe Zichermann, beamME
- **Panel: Forget Dragon's Den: What Venture Capital Really Means For You**
  Carlos Espinal, Doughty Hanson Technology Ventures; Sean Seton-Rogers, PROfounders Capital; Nic Brisbourne, DFJ Esprit; Paul Flanagan, Ariadne Capital; Tim Merel, BIS Capital

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ZOMBIE GOES DOWNLOAD-ONLY WITH UNREAL ENGINE 3 FOR BLACKLIGHT: TANGO DOWN

Independent developer Zombie Studios has been working with Unreal Engine technology for almost a decade, shipping games like *America's Army: Special Forces, Shadow Ops: Red Mercury*, and *Saw: The Video Game*.

The studio's latest project, *Blacklight: Tango Down*, is a fully featured, downloadable multiplayer shooter for Xbox Live Arcade, PlayStation Network and PC, slated for release this summer.

Set 25 years in the future, *Blacklight: Tango Down* is a covert military action epic based more on science-fact than science fiction.

Early buzz has emphasised the game's high-quality visuals, complete levelling system, Black Ops co-op mode, generous customisation options, equipment like Hyper Reality Vision (HRV) visors and weapons like digi grenades.

Multiplayer modes support up to four players with the ability to seamlessly jump in and jump out of the action at any time.

Zombie has found certain Unreal Engine 3 features to be indispensable for quickly achieving the team's creative vision.

"I think Epic's Lightmass and Scaleform GFx features are my favorites in *Tango Down*," says Mark Long, CEO of Zombie Studios.

"Ambient occlusion takes scene realism to a new level. Our environments look stunning after just a default pass on lighting.

"What used to take weeks before can be done in hours with Lightmass. The level of control the environmental artists and level designers have allows us to get under the hood to optimise every element, so these visual improvements don't impact framerate."

"GFx is Scaleform's Flash transcoder for UI components," Long adds. "Authoring in Flash and exporting directly into Unreal allows our interface artists – and increasingly, our level designers – to rapidly iterate UI designs and to add state-of-the-art motion graphic effects to our menus, HUD and even mini-games. We're using almost every feature Scaleform offers in *Tango Down*."

Long explains how Epic's direct licensee support in tandem with the prolific community of Unreal Engine developers is crucial to his team's productivity.

"The Unreal Developer Network (UDN) is Epic's secret weapon," reveals Long. "There are literally hundreds of developers sharing information in real time on the UDN.

"The support from Epic is great, but nothing beats the support of a peer trying to solve a similar problem. Epic is way ahead of the curve in community tools and communication."

Zombie is pushing the envelope even further with its *Blacklight* property, expanding the military action adventure franchise to include movies and comic books from Fox Atomic Studios. And it's using Unreal Engine 3 technology in some new and exciting ways.

NOT JUST GAMES: ZOMBIE TO MAKE FEATURE FILMS WITH UNREAL ENGINE 3

"We're doing something really cool with Unreal Engine 3 that no one has tried before," continues Long. "Through our partners in Blacklight Transmedia, we're using Unreal to produce a live action feature film titled *Samurai*. We just completed a proof-of-concept that composites live-action actors shot on a green screen with props and environments created in Unreal.

"The goal is to share movie and game productions, and it is amazing looking."

Also on the horizon at Zombie is the Unreal Engine 3-powered, third-person survival horror game *Saw II* for PlayStation 3 and Xbox 360. Published by Konami, *Saw II* is scheduled for a simultaneous release with the *Saw VII* motion picture later this year.

For UE3 licensing inquiries email: licensing@epicgames.com

For Epic job information visit:www.epicgames.com/epic_jobs.html

UPCOMING EPIC ATTENDED EVENTS:

E3 2010
Los Angeles, CA
June 15th to 17th, 2010

Develop Conference
Brighton,UK
July 13th to 15th, 2010

Gamescom
Cologne, Germany
August 18th to 22nd, 2010

Please email: mrein@epicgames.com for appointments.

To discuss anything raised in this column or general licensing opportunities for Epic Games' *Unreal* engine, contact: **mrein@epicgames.com**

FOR RECRUITMENT OPPORTUNITIES PLEASE VISIT:
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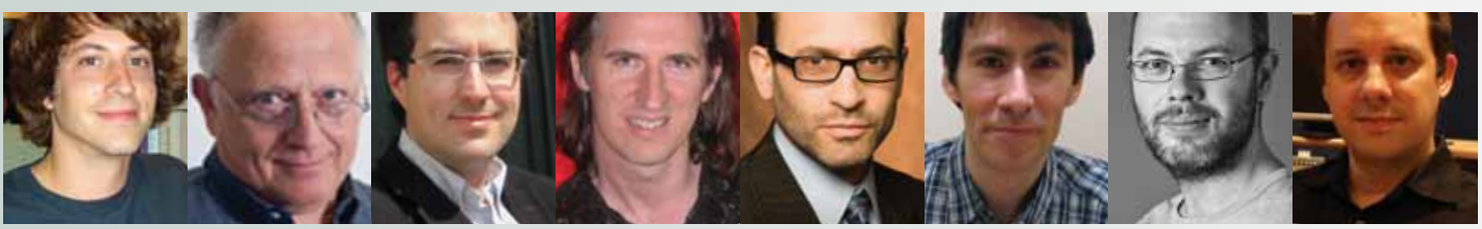
Mark Rein is vice president of Epic Games based in Raleigh, North Carolina. Since 1992 Mark has worked on Epic's licensing and publishing deals, business development, public relations, academic relations, marketing and business operations.
www.epicgames.com

HEARD ABOUT

The Develop Conference Audio Track 2010

John Broomhall dusts off his bucket and spade. He's looking forward to another year's pilgrimage to Brighton's seafront for a packed day of game audio presentations at the 2010 develop conference…



Where will you be on the July 15th? I'll be welcoming some top talent to the 2010 Develop audio track – and I can't wait to hear what they have to say. After all, you'd have to go a long, long way to find such a gathering of senior game audio developers discussing the state of the art at this level.

And hearing what your competitors have to say from the bleeding edge is no mere jolly – though jolly it will be. In this tough climate, seizing the chance to spend a focused day discovering what industry leaders and pioneers from around the globe are thinking and doing is a no-brainer. Standards are high; expectations are even higher as technology is increasingly harnessed to provide a platform for the power of creative ideas to differentiate our productions. So yes, there'll be talk about technology. But also about approach, methodology, creativity and inspirational sound design.

Ben Minto from EA DICE works on games like *Battlefield*. He'll be talking about (among other things) finding and managing original source material covering location and foley recording for DICE's truly cutting edge productions. Meanwhile, Sony London's audio programming ace, Nicolas Fournel, will show how audio analysis can be used to define new gameplays, build better audio engines (using dynamic mixing and audio shaders, for example) and create smarter sound design tools.

Celebrated composer James Hannigan will join audio director Nick Laviers from Los Angeles to examine how they applied music techniques from character action style games to improve story telling in *Command & Conquer*, helping make RTS gameplay a more emotional experience.

Also joining us from the States will be SCEA's Steve Johnson, who oversaw soundtrack creation for the BAFTA-nominated (Best Use Of Audio) and elegantly enigmatic *Flower*. Building on that experience, and citing lessons learned from other titles, he will examine the ingredients and thinking required to go beyond the norm and really use audio as narrative.

> ***"This is an exciting, vibrant time for audio in games. With better tools, bigger budgets, better practice and bigger visions, audio designers can explore new creative territory."***

Meanwhile, Sony Europe's audio head honcho, Garry Taylor, will talk about his personal quest to translate traditional linear mixing approaches and methodology into the world of interactive audio in a session examining the current cutting edge and near future of interactive audio mixing – both the technical how and the creative why.

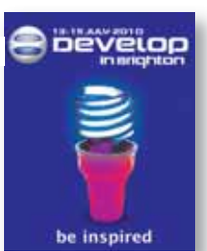
Finally, headlining the day's proceedings with one of our most important audio keynotes ever will be Activision's Adam Levenson, director of Central Audio & Talent. Joining us from Santa Monica, California he will discuss his vision for a game audio future where dialogue and music will really respond and correspond to character thoughts, emotions and interactions in real-time with a high level of adaptability. He will outline how he believes this brave new world of games will sound, and how we might design the character performances and scoring of the future. Compelling stuff.

Game audio has come a very long way on a fantastic journey. The technical fidelity and creative prowess increasingly exhibited in the audio of top-tier titles like *Uncharted 2*, *Batman: Arkham Asylum*, *Left 4 Dead 2* and the latest *Call of Duty* continue to impress an industry and public who, these days, don't see any reason why their video games shouldn't be sounding every bit as good as their movies.

Despite the economic climate, this is an exciting, vibrant time for audio in games. With better tools and bigger budgets, better practice and bigger visions, this generation of audio designers can explore new creative territory and maybe even rewrite some of 'the rules'. Why shouldn't sound and music in games go beyond anything that's been done to date in movies or interactive media generally?

If you have any interest at all in the music, sound and dialogue of video games, please find time to join your game audio community, gathered to hear stellar speakers discussing the very best of best practice, not to mention exploiting ample opportunities for networking over a cold beer or two.

You can book your place right now at www.developconference.com



The Develop conference takes place from July 13th to the 15th in Brighton

John Broomhall is an independent audio director, consultant and content provider and will chair the 2010 Develop Conference Audio Track.
develop@johnbroomhall.co.uk
www.johnbroomhall.co.uk

UNITYFOCUS

Unity Content Helps Launch SteamPlay

In the wake of the release of the Mac version of Steam, **Thomas Grové** talks to Muse Games about its experience of the distribution platform…

When Valve's popular Steam distribution platform was finally released for Mac last month, several Unity games were featured as 'SteamPlay' launch titles; games which you can buy on Steam and then download for either Mac or PC, or both. Those titles included *Max and the Magic Marker*, *Bob Came in Pieces*, and *Guns of Icarus*. Although Steam is for distributing downloadable titles, each of these title's developers has leveraged Unity's cross platform publishing – and the Unity Web Player – to bring increased exposure to their games.

- Game title: Guns of Icarus
- Development time: Five Months
- Team size: Four People
- Distribution: Available on Steam (Mac and PC), MuseGames.com, Facebook, and Shockwave

www.musegames.com

INTERVIEW: AUSTIN LANE AND BRIAN KEHRER, CO-FOUNDERS OF MUSE GAMES

Is Muse Games a developer or a portal?
Both. We believe completely in the future of high-quality gaming in the browser, and MuseGames.com is our attempt to realise that future. That said, we feel it's our duty to set the bar through our own games. In the end, people are looking to play great games, and if they're no good it's irrelevant what the rest of the experience is.

How long has Muse Games been using Unity?
Muse has only existed for about 16 months, but the core team has been using Unity since 2006.

What was the process of getting Guns of Icarus onto Steam like? Did you have to do any technical integrations? Any loops that you had to jump through with Valve?
Really easy actually. We just showed them the game and what people thought about it and they said yes.

There has been no loop jumping whatsoever and we've really enjoyed working with them. Technically though, yes, there are implementation details. We had to build a compatibility layer between the C++ of Steam and the C# of Unity – and that took some time. If anyone's interested, we're going to figure out how to offer this solution along with our other API tools to developers, sometime this summer.

What's your favourite aspect of using Unity?
Ease of prototyping and multiple deployment is by far Unity's killer feature. However, equally important to the easy-to-use tool set and API is the ability to dig deeper into the program and interact with the application on a much lower level. We find that Unity does exactly what we want 90 per cent of the time – out of the box. When we need to go deeper or change fundamental behavior, Unity doesn't get in the way or slow us down.

Have you extended Unity's editor in any way?
We've frequently used the editor scripts to add small features or to integrate better with our art pipeline; this includes things like exporting arbitrary textures to files, or changing the default mesh import settings. But there have been a couple of larger extensions, as well. The first is our build scripts, which have to build multiple versions of the same game for different distributors with different integration requirements, feature restrictions, and so forth.

We've also added game-specific extensions to turn the Unity editor into something like a level editor, using custom assets and editor tabs, that can integrate new scenes with our game code without a programmer needing to set anything up.

Have you used any other technologies like Flash or Unreal? How do they compare?
Not really. Flash is a strange solution because it wasn't originally designed for game development. It's been co-opted because of its plug-in penetration, while Unity was built from the beginning to make powerful, modern games.

If we want to change the future of gaming on the web, we need to look to the future of gaming on the web. We don't think Flash is the future.

Unreal is a great, powerful tool like Unity. Just look at the level of games being made with it. But it can't handle the web and cross-platform development we are focusing on, and quite frankly, the licensing terms are really expensive for an indie like us.

It's no secret we favour Unity for these reasons and more.

Do you have any tips on how to get exposure for your game or how to reach new audiences?
Make an original game, and polish it. Gamers, despite their cynicism, are the most engaged and adventurous audience around. If you make something good, they will give you a chance. I'm not sure why so many people choose to clone games they've seen countless times before. Don't sell yourself short. Pretend you're building the next franchise. If you only had one chance to make a game ever, even if it's just in your spare time (actually, especially if it's in your spare time), what game would you make?
Make that game. That will go miles further than any marketing you can do. Also, good trailers are really worth it – chances are high the trailer is where the potential player will be making a go or no-go decision.

Anything else about Unity that you'd like to share?
Unity makes a lot of what we do possible – rapid prototyping and development, 3D on the web, cross-platform deployment. But Unity alone, cannot change the end consumer's mind. It's up to us developers to show people what the tool is capable of. Content sells the platform, and it's going to take all of us to change the face of online gaming.

VVoh!\I[)3r

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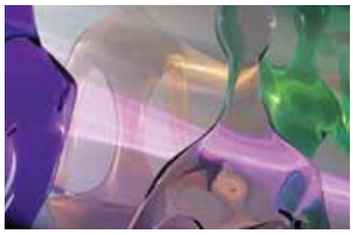

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TOOLS: Brammall and Jackson join Unity Tech
p60

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p62

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Studio News

This month: Gusto, Codemasters, Tango & Port Plexus

GUSTO GAMES EXPANDS

Oxfordshire-based inde studio Gusto Games has recruited 11 new members of staff to reinforce its established development team.

"This year will see the release of four console and PC titles, which will be a remarkable accomplishment for Gusto. We have managed to attract some awesome talent to the studio enabling us to complete all of our 2010 titles on schedule, as well as begin development on those earmarked for 2011," said Gusto development director Steve Archer.

"Our reputation for delivering quality titles on time and to budget strengthens our aptitude for expansion and therefore to meet the demand of new opportunities as they are presented to us," he added.

From left to right are: producer Matt Molloy; animators Seb Kalemba, Dean James and Sam Bickley; programmers Pawel Karczmarczuk and Rafael Solorzano; artists Stuart Hansell, Matt Minnitt, James Catterson, Seb Squires and Ritchie Moore.
www.gustogames.com

CODEMASTERS SIGN MACDONALD

Jamie Macdonald, former SCEE WWS VP, has been hired as the new Codemasters senior vice president of production following investment in the studio from Reliance Big Entertainment.

The move represents part of what Codemasters is calling the "building [of a] strategic focus of a future portfolio" for the firm, starting with a "strengthening of the Codemasters studio leadership".

Macdonald said he was honoured to be joining a studio of Codemasters standing.

"This is an incredibly exciting time to become part of the Codemasters family and I am relishing the opportunity to work across the company's globally appealing content on multiple platforms while exploring new delivery methods and revenue models," he said.
www.codemasters.co.uk

NISHIKAWA LEAVES PLATINUM, JOINS TANGO

Platinum Games is set to lose one of its three founders to a new studio headed up by Shinji Mikami.

Shigenori Nishikawa will depart from the Osaka-based studio that built *Bayonetta* and *MadWorld*, and will likely relocate 250 miles east as he gets set to work at the brand new Tokyo-based outfit Tango.

Tango is headed up by Japanese game designer Shinji Mikami, who hopes to see his studio to grow aggressively and plans to see its workforce reach 100 people within seven years of opening.

Nishikawa has previously worked with Mikami on projects as high-profile as *Resident Evil 4*.
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HEIN APPOINTED PORT PLEXUS COO

Former Bigpoint chief games officer Marko Hein has joined Port Plexus as COO. The German company specialises in the design and production of special edition and press edition games, including those with elaborate packaging and limited runs.

Hein, who has also held senior positions with THQ, Nintendo and Koch, is now charged with driving the expansion of Port Plexus' international business and increasing the Schwarmstedt-based firm's future activities in the video game segment.

"The strategic and international expansion of Port Plexus will be an integral part of the development of the company within the next years" says Port Plexus CEO Michael Jadischke.
www.portplexus.com

Moving on up

Our monthly focus on a rising development star

Nick Thompson, Moving on up Q&A

Chief Technical Officer, Jagex

Thompson has worked as director of Dreamforge Software and as software engineering manager at MicroProse UK, as well as spending time at Codemasters and Simergy. He joined Jagex five years ago, starting out as a programmer and moving on to become head of core technologies before his most recent promotion to CTO.

What do you hope to achieve in your new role as CTO at Jagex?
For years now Jagex has lead the free-to-play MMOG market with it's innovative browser based technology. From the player's point-of-view what they see is a game that starts up rapidly and scales to give them the best playing experience. In fact, what goes on behind the scenes is very complex. Our game worlds, server/client technology and thin client delivery are all hand crafted with great love and care. Competition in the market is always increasing so I am focused on evolving and improving our existing platform to take it forward to even bigger and better things whilst also looking for new directions and uses for our technology.

Where would you like to be in five years?
Jagex has ambitious plans to broaden it's market penetration and I'm excited about being part of that. We are in an age where technology holds untold possibilities to entertain and to change our lives. In five years time I will have helped steer Jagex to greater things and will have persuaded the board that a research office in Monaco is really a good idea.

What excites you about the video games industry and why?
From the time I got my first Sinclair Spectrum 48k computer I knew what I wanted to do as a career. To me computers are pure magic with infinite possibilities and being able to tame them to entertain people is what I love to do. The diversity and penetration of games has never been greater and it's not going to end any time soon

What advice would you have for people hoping to emulate your success?
Work is not work at all if it's something you are truly passionate about. Find your passion, pursue it for more years than you have fingers and toes and be nice to people along the way, you never know where or when you might meet them again.

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Studio Spotlight

IMAGINATION STUDIOS

Area of expertise: Art Outsourcing

Imagination Studios is a Sweden-based art outsourcing studio specialising in providing art assets and mo-cap animation to the video game and entertainment industries.

The company provides motion capture of body, face, eye or full performance capture as needed with multiple actors.

Imangiantion works with projects at every stage of the art pipeline.

Motion capture is performed in a shoot space measuring 8x14x5 meters, allowing over ten actors to work simultaneously (up to five in high quality real-time), supported by instant playback, shoot crew, extensive prop inventory, database management and precise reference material.

A seperate sound recording, facial and "vocap" studio is fully equipped for performance capture and scalable facial capture with anything from 50 to 200 markers.

Finally, a fully equipped animation studio is available with experienced trackers, editors and animators.

Imagination has worked on titles like DICE's *Battlefield: Bad Company 2,* EA's *Mirror's Edge,* Capcom's *Bionic Commando and* Remedy's *Alan Wake*.

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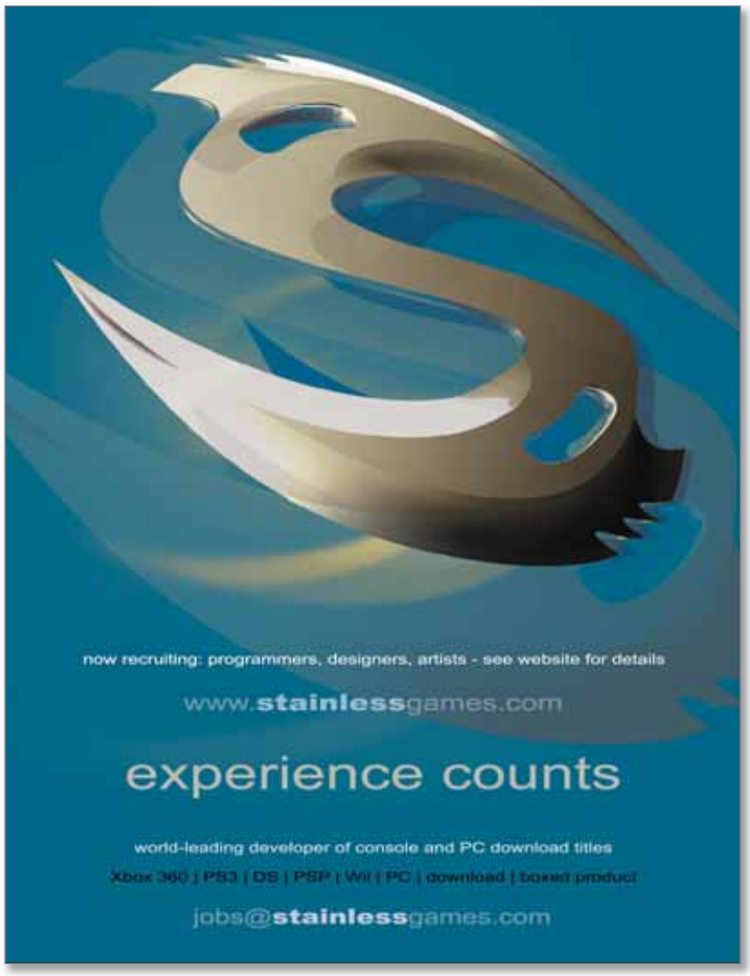
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Tools News

Industry vets signed by Unity

Engine studio Unity Technologies has boosted its team with two key hires. Former Autodesk European sales manager Andrew Brammall and one-time GarageGames director of licensing Davey Jackson joined as regional sales directors for Europe and North America respectively.

"I'm delighted to be joining the Unity team at such an exciting time in the company's history," enthused Brammall (*right*). "I've been an admirer for a while, and the combination of cool technology, bright people and an amazing community of users is remarkable."

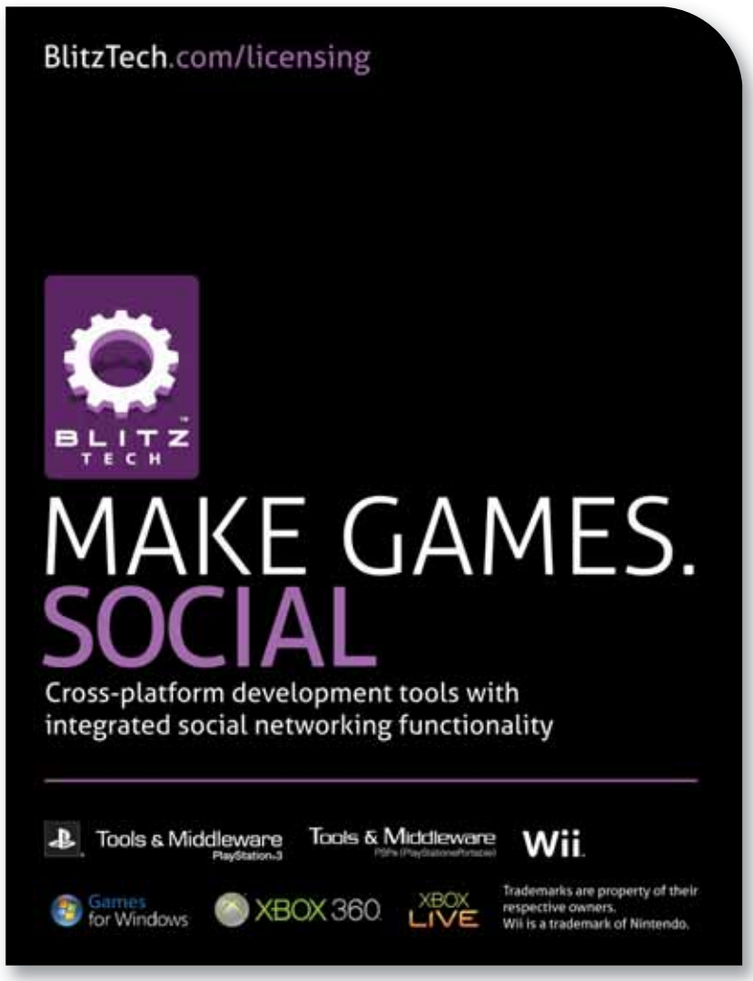
"Unity has shown a tremendous commitment to developers by creating powerful, accessible technology and providing paths for developers to succeed in emerging game markets," added Jackson. "I'm happy to be joining the company. The broad adoption of Unity in these markets is helping everyone participate in this growth."

The pair take on their new roles as Unity 3's release draws near. Brammall brings additional experience having held sales positions at Kynogon SA and Havok, while Jackson can call on his five years growing annual revenues and building relationships with a range of education, simulation and console development clients.

"Unity has grown beyond expectations. We are amazed at how it is being used by ad agencies, educational institutions and game developers," said David Helgason, chief executive officer of Unity.

Brammall will work in Unity's UK office in Crawley, while Jackson is to work out of the San Francisco HQ.
www.unity3d.com

Blitz Games Studios **01926 880000** **www.BlitzGamesStudios.com**



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Tool Spotlight

FMOD DESIGNER 2010

TECHNOLOGY TYPE: AUDIO

Australia-based middleware studio Firelight Technologies has released of the FMOD Designer 2010 tools bundle.

The sound design tool is free to use with any FMOD licensed project, as well as for students, teachers and non-commercial projects.

Features include an improved interface with upgraded layout and workflow enhancements intended to make creating game audio easier and faster. Unreal Engine 3 integration is featured, as well as integration with CryEngine, Unity, BigWorld, Vision Engine and Scaleform engines.

Firelight said that the bulk editor also supports most commonly used properties and provides a graphical interface for each; volume and volume randomization, pitch and pitch randomisation, reverb wet and dry levels, fad in and out, minimum and maximum distance, rolloff curve and playback behavior.

A new graphical bulk editor is included, which Firelight say was developed in collaboration with several of their users.

A multi-track editor is also included, which Firelight say allows for the creation of layerd sound effects. This editor is set to also support the DSP effects built into the FMOD Ex API. DSP effects include lowpass and highpass; delay, flange and chorus; tremolo, distortion, normalisation; parametric EQ, ptch shift, compression and reverb.

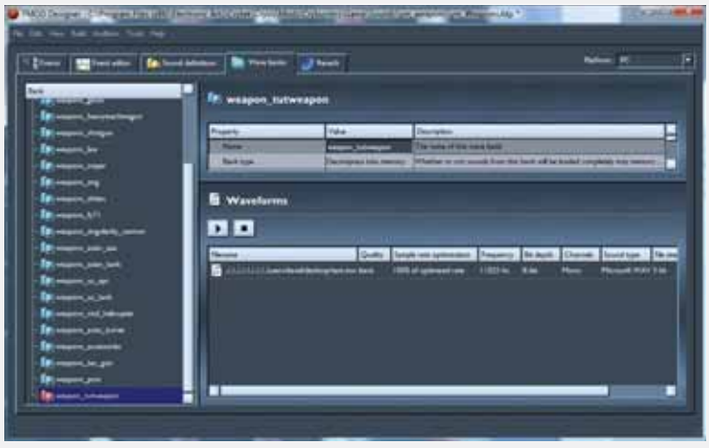
As well as this, the firm say that a I3DL2 compatible reverb effect built into the FMOD Ex API allows for the creation of reverbs for all game environments with 26 reverb presets that can be simply mixed and matched.

An FMOD live profiler is also included, which Firelight allows developers to monitor audio levels, performance, and resource usage live. It provides a live visual representation of both CPU and memory usage as the game is played, as well as displaying the DSP routing within the FMOD Ex sound engine.

Sound banks are included in FMOD Designer 2010 which break up game audio into groups, with the intention of saving on memory space. The bundle also supports several audio format standards; PCM; ADPCM, GCADPCM; MP2, MP 3; CELT, XMA and VAG.

FMOD Designer 2010 also supports Windows, Mac, Linux, Xbox 360, Wii, PS2, PSP, PS3, iPhone & iPad. Firelight say the kit can create and manage content for multiple platforms and markets within a single project.

"For FMOD Designer 2010 we have worked collaboratively with our users to develop many interface improvements and workflow enhancements. We've also added in a 'visual bulk editor' – it's very sexy and it will make working with large projects much, much easier," said the FMOD Designer 2010 lead programmer Raymond Biggs.



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Services News

This month: New faces at Amiqus Games, Image Metrics

Kevin Dekoninck has joined Amiqus Games, the award-winning video games industry recuiter, as a games resourcer. He will be working from the firm's HQ in Warrington, UK.

Dekoninck is a French-speaking recruiter who will be assisting and supporting the senior management of Amiqus with the day to day recruiting for key accounts and talent in the games industry across the UK, Europe, Canada and the United States.

Dekoninck will also be advising individuals with career moves in the technology industries and assisting with the new Amiqus Games website.

"I enjoy helping our clients with interviews and making sure they go in fully prepared," Dekoninck said.
www.amiqus.com

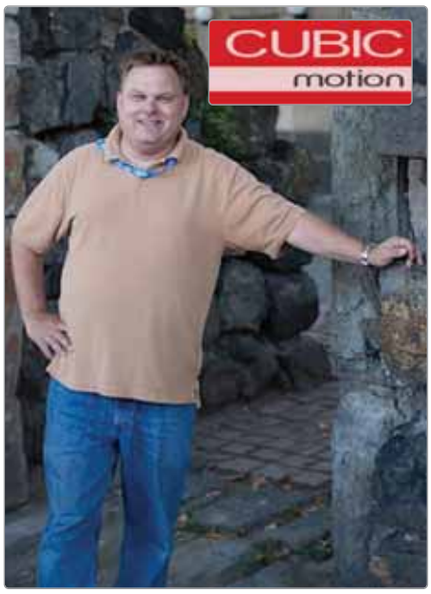
High profile facial animation studio Image Metrics has appointed former Havok and Criterion man Michael Crigler as its new vice president of North America sales.

Having spent 10 years with his previous employer, Crigler is now charged with overseeing Image Metrics' regional sales directors, sales operations and customer relations staff.

"Michael is perfect to lead our sales effort given his experience with developers as they adopt technology-based solutions like rendering, animation, physics, AI and audio," said Image Metrics EVP Brian Waddle.

"Throughout my career, I've been focused on working with companies that provide solutions for tough challenges in game development, which makes Image Metrics a perfect fit for my expertise," added Crigler.

"Given the difficultly of creating believable faces in games on time and on budget, I'm excited to join Image Metrics to help game developers learn about how the company's solutions can solve their facial animation challenges and tell better stories through compelling characters."
www.image-metrics.com



Facial animation firm Cubic Motion has appointed Eric Peterson as the firm's consultant.

The move sees Peterson leaving rival firm Image Metrics.

Peterson explained his move by praising his new employer.

"Cubic's strength comes from their Ph.D. team's ability to evaluate the best technical approach on a project-by- project basis," he said.

"The company is run by experts in performance-driven animation, an important field to our industry.

"They build custom pipelines in days with great results at economical prices, helping to transform the outlook for developers considering top-quality facial animation."
www.cubicmotion.com

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Training News

Search for a Star reches final stages

Search for a Star – the new nationwide competition designed to highlight and reward the UK's most promising video games developers – has progressed towards the final stage. 150 Graduates from 35 Universities were nominated for this year's award.

The first stage saw those graduates battle with a series of technical questions under exam conditions. The top 10 per cent then progressed to Round 2, a coding project set by Relentless Software.

Five were selected from this stage, Dave Buckley of Huddersfield University, Hazel McKendrick of Abertay University, Henry Golding of Derby University, Petrus Botha of Queen's University Belfast and Robert Heywood of the University of Huddersfield.

These finalists will now face a panel interview in a few weeks time with industry professionals including Relentless HR manager Sarah Maynard and Senior Programmer Lizzie Attwood.

The first two stages are identical to the recruitment procedure followed by many UK studios – so the grads that make it through have the technical skills and attributes to make the step directly into the games industry.

The successful candidate from these interviews will go on to receive the Search for a Star Award at the Develop Conference 2010, held in Brighton from July 13th – 15th.
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Editorial: June 18th, 2010
Advertising: June 21st, 2010

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Editorial: July 23rd, 2010
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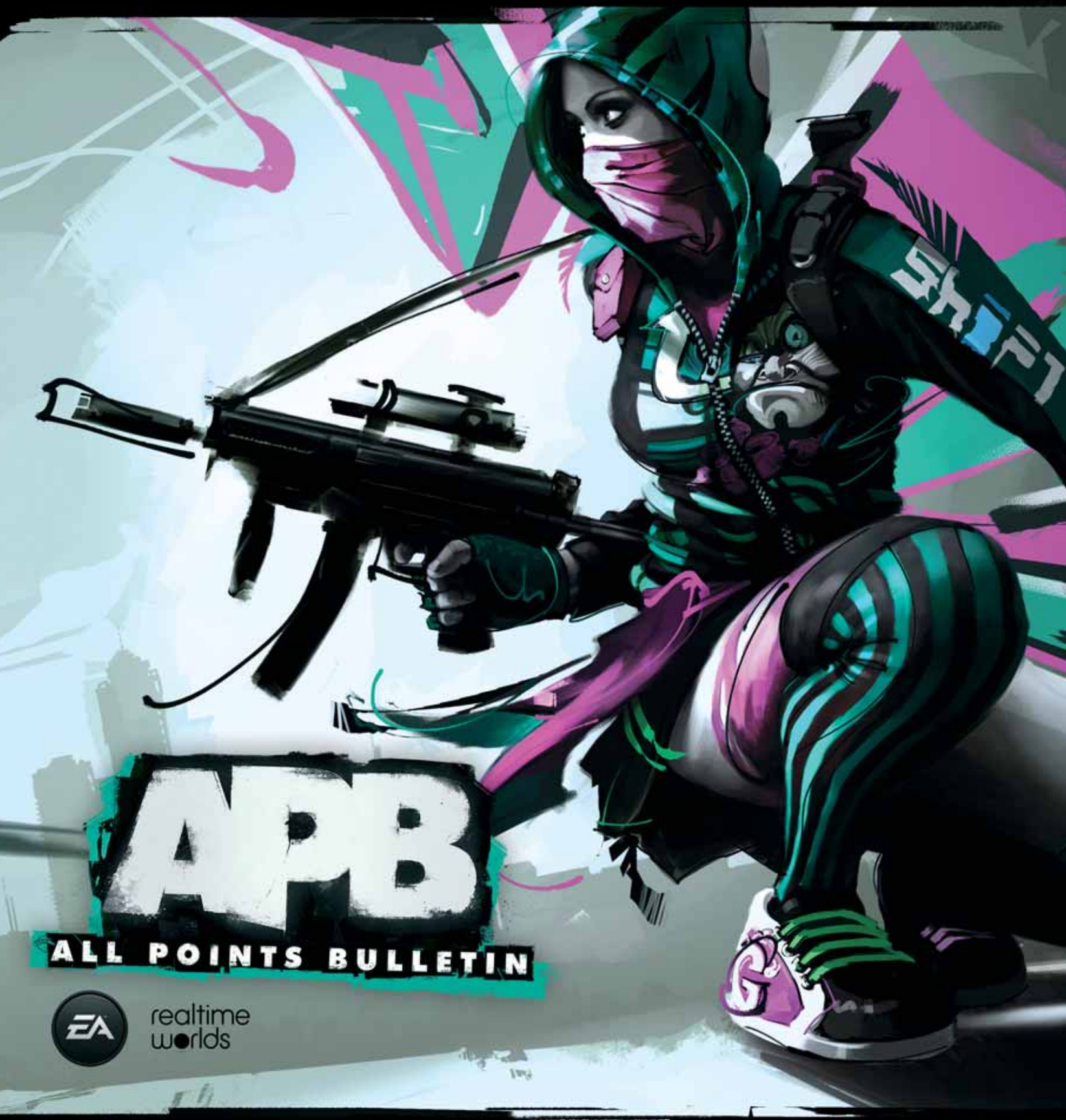

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